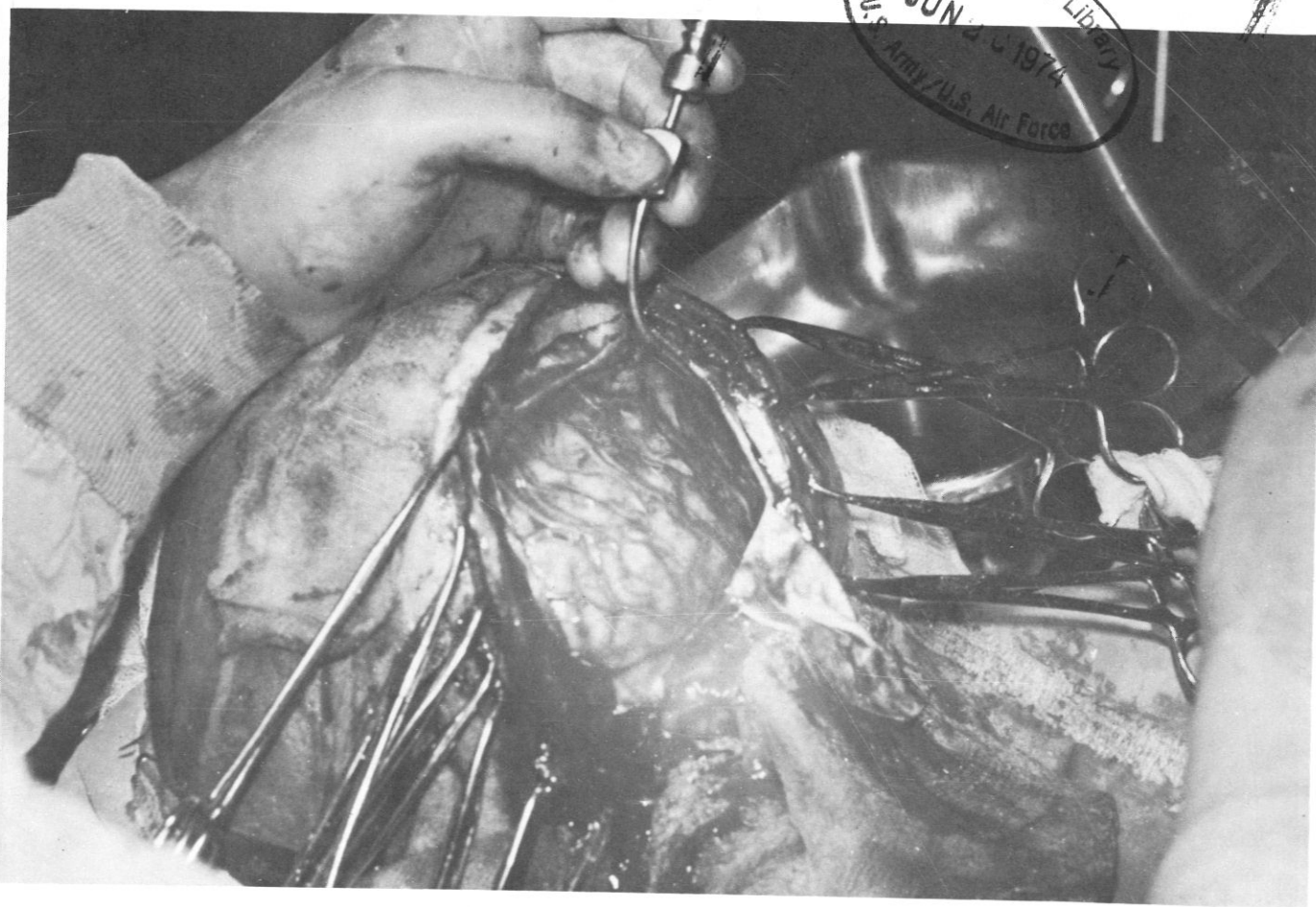




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Credits: All pictures are Official Navy Photographs unless otherwise indicated.

The front cover, an operative view of osteoplastic craniotomy for a huge subdural hematoma, was contributed by CAPT Frederick E. Jackson, MC, USN, chief of neurological surgery at Nav Hosp Camp Pendleton, Calif. While the hematoma had been removed before the photo was taken, solid clot remains in the superior portion of the wound. The brain is still depressed, not yet reexpanded to fill the empty space remaining after removal of longstanding subdural hematoma. The Jackson-Pratt subdural brain drain, plus intrathecal instillation of 70cc normal saline aids in prompt reexpansion of the brain.

The continued support of the Illustrations & Exhibits, and the Photography Divisions of the Media Dept., Naval Medical Training Institute, NNMC, Bethesda, Md., is gratefully acknowledged.



from the Chief

Because of the importance and timeliness of the topic, I have asked Rear Admiral Waite, my Assistant Chief for Medical Support to Military Operations, to prepare this month's "From The Chief." His remarks with which I heartily concur, follow. Also, your ideas and views on this subject are welcome and needed.

One hears, recurrently, several concerns of importance voiced throughout the Navy's Medical Department — "that we will be organized into a joint defense medical service and lose our Navy identity" and "that we are in danger of being replaced by some other governmental or civilian contracted health care system."

I submit that there are several major strategies available to us to prevent such concerns from becoming reality. One, is to remain alert to the changing medical, social and political environments, and become self-adjusting to change. By doing so, we will negate any effort by an outside agency to dictate change because of lack of response on our part.

The other, and more to the point of this message, is that we must emphasize to the maximum extent feasible the one thing which makes us unique and unassimilable. That one thing, is our obligation to serve with and support the operating forces of the Navy and Marine Corps.

I realize fully, that in recent years, without the drawing power of our graduate training programs and the resultant input to total strength, that we would be hard put to support any requirement, including our operational commitment.

In this sense the operational commitment is one which is not self-supporting, in that it demonstrably does not attract large numbers of physicians into the Navy. Many of us also know that it is indeed this type of career experience which leads many of our physicians to a career commitment.

How then, do we approach this dilemma of a genuine commitment and the need to reinforce our retention with medically relevant and career enhancing assignments?

To give the necessary emphasis to medical support of military operations, we have established a position in the Bureau of Assistant Chief for Medical Support to Military Operations. A major objective of this new code will be to insure that the operational commitments are fully supported and at the same time represent relevant assignment and utilization of our medical personnel.

One plan, which addresses this problem and which has considerable promise, is the Fleet Medical Pool or Single Manager Concept. In this plan medical personnel would be assigned to the Fleet Commander or Fleet Marine Force Commander with additional duty to the nearby regional medical center. Between operational deployments, exercises and pertinent support to the operational unit, pool members would participate in the region's health care program and take advantage of the professional training opportunities offered.

This basic plan with some refinement offers a means to accommodate effective utilization with our stated priority to support of the operational forces.

This approach combined with the full career opportunities the Navy traditionally offers in aerospace and undersea medicine should give the necessary emphasis to operational support that is required. It is realistic and practical to expect all of our personnel to understand that operational support is naturally a part of belonging to the Navy's Medical Department.



PROTOTYPE AMHT AT NNMC

Target date for installation of a prototype Automated Multiphasic Health Testing (AMHT) service at the National Naval Medical Center (NNMC), Bethesda, Md., is Jun 1975. The AMHT service will provide for a centralized physical examination which will support mandatory requirements for these examinations and professional objectives in the area of diagnostic screening.

IBM 1401 SYSTEM

All IBM 1401 system requests have now been approved by CNO.

COMPUTERIZE TREATMENT PLANNING SYSTEM

Three Naval Regional Medical Center (NRMC) Radiology Departments are using computers to assist in the radioisodosimetric calculations required for planning antineoplastic radiotherapy regimens: NRMC San Diego uses a dedicated on-board computer; NRMC Philadelphia and NNMC Bethesda share time on a commercial machine.

NRMC San Diego and NNMC Bethesda employ on-board computers to process radioisotope scan data. The Navy is currently evaluating the desirability and feasibility of enhancing and standardizing these systems.

RETIRED PAY AT RISK

By decision of 27 Mar 1974, the Comptroller General has revised the method of computation of retired pay for military This could result in a reduction in the amount of retired pay that will be received by persons now on active duty, when they reach retirement. DOD will seek introduction of corrective legislation.

TORT IMMUNITY PENDING

Other pending legislation includes a Justice Department bill to provide tort immunity for all Federal employees.

Congressman Sikes' bill would extend tort immunity only to medical personnel of each Service.

PATIENT ENTITLEMENTS AND CARE PRIORITIES

The current shortage of GMOs coupled with SER base-closure actions have resulted in the application of patient priorities at some facilities to limit health-care accessibility to certain beneficiaries.

Three aspects of consideration involve: (1) eligibility, the basis of priority determinations established and defined by law; (2) entitlements, the health care benefits authorized and excluded by law, as enumerated in BUMEDINST 6320.8A, and; (3) priority, the order in which beneficiaries are accorded health-care benefits when resource constraints affect capability, i.e., active duty members, their dependents and survivors, NATO military, Senior ROTCs, midshipmen, etc.

MEDICAL PAY BILL SIGNED

President Nixon has signed into law a bill which offers military doctors a bonus of up to \$13,500 a year to remain in uniform. Signed on 6 May 1974, the bill offers Medical Corps officers below the pay grade of O-7 an amount not to exceed \$13,500 a year for each year of active duty he or she agrees to serve after completing either the initial active-duty obligations of four years or less, or the first four years of longer initial obligations.

To receive the bonus, Navy doctors must sign a written agreement to serve on active duty for a certain number of years, and must be declared qualified to enter into the active duty agreement by a Board of officers in the medical profession. Physicians must also be designated by SECNAV as being qualified in a critical specialty. They cannot be undergoing intern or initial residency training when they receive the bonus.

Those doctors who fail to complete their obligation as specified in their agreements will receive bonus money only for the portion of the period they do serve, and will be required to pay back any extra money they receive.

An implementation plan which requires Presidential approval before the payments can begin is being prepared by the Office of the Secretary of Defense.

The new bonus will replace continuation pay for Medical Corps officers below the grade of O-7. Special pay and bonuses for dentists are not affected by the bill. Effective date of the law is 1 Jun 1974; while special pay will be computed as of that date, BUPERS reports that it is unlikely the bonus payments can be made that soon.

Provisions of the bill will be added to the DOD "Military Pay and Allowances Entitlements Manual" in the near future.

In addition to the new bonus, the bill also revises some of the special pay provisions for Navy physicians. Those who have served on active duty at least one year, but who have not completed two years of active-duty service as medical officers, will continue to receive \$100 a month in addition to their pay and allowances; those who have served over two years will receive \$350 special pay per month.

DENTAL REMEDIAL ENLISTMENT PROGRAM

NAVCRUITCOM has proposed the institution of a program to treat certain correctable medically disqualifying conditions found in Aviation officer candidates, to qualify them for entrance into the Aviation Officer Program.

Dental caries is said to account for the highest percentage of those temporarily disqualified. But present capacity for dental treatment is not unlimited, and dental care for other eligible and authorized personnel in the Pensacola area should not be jeopardized Look for other alternatives in the future. ☸

the Deputy Chief



David Paul Osborne was born in Bradford, Pa., on 20 Feb 1915, the son of Plummer N. and Louella (Harrison) Osborne. He received a B.S. degree in 1938 at State College, Pa., and was awarded his M.D. degree in 1942 at Temple University School of Medicine, Philadelphia. On 14 Jun 1941 he was appointed Ensign in the U.S. Naval Reserve, reporting for active duty as a LTJG in the Medical Corps of the U.S. Navy on 10 Jul 1942. He subsequently advanced in rank to that of RADM, to date from 1 Aug 1969.

Following internship at Nav Hosp Philadelphia, RADM Osborne served as a junior medical officer in the Naval Dispensary, Naval Operating Base Key West, Fla. In Dec 1943 he became Medical Officer on the staff of Commander LCI (L) Group THIRTY-FOUR. He was awarded the Navy Commendation Medal with Combat "V," and was commended for his "performance of duty as Senior Medical Officer of an amphibious task group prior to, and during the invasion of Normandy Beaches, France, on 6 Jun 1944"

A surgical resident at Nav Hosp Philadelphia from Sep 1945-Oct 1949, the Admiral returned to that hospital's surgical staff in Jul 1951 following service as Senior Medical Officer in USS ROANOKE. From May 1954-Aug 1956 he was a staff member at Nav Hosp Memphis, Tenn.

From Aug 1956 to Oct 1969, RADM Osborne held various positions of progressively increasing responsibility at the Naval Hospital, National Naval Medical Center, Bethesda, Md., culminating in the office of Commanding Officer there from 30 Jun 1967 to Oct 1969. He was awarded the Legion of Merit "for exceptionally meritorious service as Chief of Surgery from Mar 1960 to Nov 1966, the latter five months of which he also functioned as the Director of Clinical Services to the Commanding Officer of the hospital, and for continuing as the Director of Clinical Services and Coordinator of the Dept. of Surgery from Nov 1966 to Jul 1967"

In Oct 1969 RADM Osborne became Inspector General, Medical, BUMED Code 12, and he was designated Assistant Chief of the Bureau for Personnel and Professional Operations (BUMED Code 3) in Aug 1971.

A Diplomate of the American Board of Surgery and a Fellow of the American College of Surgeons, the Admiral is married to the former Mary Frances Tuerffs of Fairmont, W. Va., and they have four children.

In his new position as Deputy Surgeon General of the Navy, RADM Osborne has the best wishes and professional support of many friends and colleagues. 🇺🇸

RAdm Etter

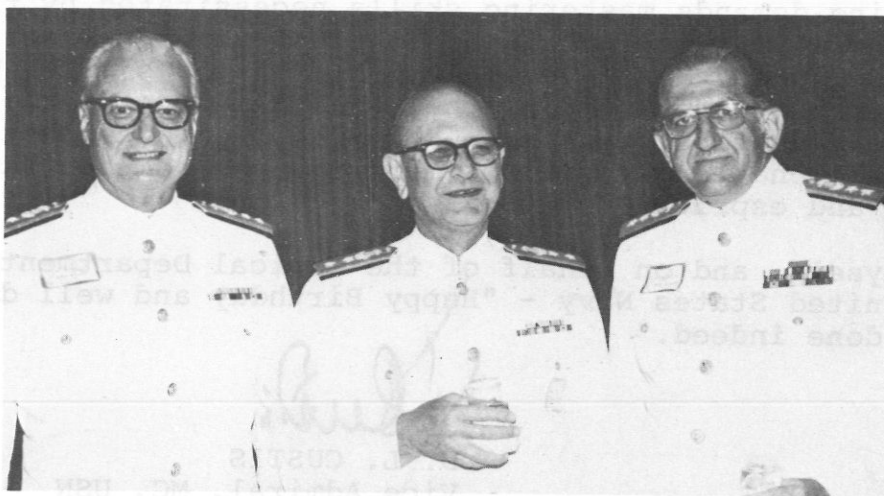
Adieu



As my active duty career draws to a close, I realize more than ever how much I will miss my friends, my colleagues, and the camaraderie that comes with being part of a great organization like the Navy Medical Department. I am indeed privileged to have had the opportunity to know and serve with so many fine members of the Navy Medical Team.

There have been many changes in our Navy since I became a jaygee, and changes will continue as long as there is a Navy — for the better I hope. We are now faced with the challenge of continuing to provide the highest quality medical care with a smaller Medical Department. This will require even more changes than in the past if we are to meet our commitments in the modern Navy. Innovations unheard of ten years ago are rapidly being implemented, and more are on the drawing board. The strength of our system is and always will be our people, and I am convinced that this strength will successfully meet the new challenges.

I am proud to have served the Nation, the Navy and the Medical Department. My thanks to each and every one of you who have helped me during these past thirty-four years. I shall always cherish the memories of my career for it has been rich in friendships, excitement and professional satisfaction.



SEE ALL, HEAR ALL, SPEAK WISELY.—Three consecutive, revered, Deputy Surgeons General are pictured toasting the Nurse Corps birthday in 1972. From left to right and in order of succession to the office, they are: RADM J.W. Albright, MC, USN (now retired); RADM H.S. Etter, MC, USN (now retiring) and; RADM D.P. Osborne, MC, USN.



THE SURGEON GENERAL OF THE NAVY
WASHINGTON

TO ALL MEMBERS OF THE HOSPITAL CORPS

As Surgeon General of the United States Navy, it is with great pride and personal admiration that I extend to all members of the Hospital Corps my heartiest congratulations and warmest wishes as you celebrate your 76th anniversary on the 17th of June.

Through personal sacrifice and long hours of hard work, with ingenuity and versatility, the Hospital Corpsmen and Corpswives, in providing the valued support necessary for the accomplishment of our mission, have earned the respect and admiration of military and civilian personnel the world over.

The epic of the Hospital Corps in war has been told many times and the legendary bravery of Hospital Corpsmen is clearly documented and recorded in the annals of history. Now, though the United States is at peace with the world, you continue to perform the skillful and dedicated care and treatment of the sick and injured on the ships at sea, under the sea, in the air and on foreign lands.

The Hospital Corps will continue to rise to the increasing demands mastering skills necessitated by the ever expanding medical technology. This is personally gratifying and a source of inspiration to us all. The challenges to be faced by the Hospital Corps in the future cannot be predicted; however, I am confident that all challenges will be met with the same enthusiasm and esprit de corps as in the past.

For myself, and on behalf of the Medical Department of the United States Navy - "Happy Birthday and well done, well done indeed."

D. L. CUSTIS
Vice Admiral, MC, USN



DEPARTMENT OF THE NAVY
ASSISTANT CHIEF OF THE BUREAU OF MEDICINE AND SURGERY FOR DENTISTRY
AND
CHIEF OF THE DENTAL DIVISION
WASHINGTON, D.C. 20372

SEVENTY-SIXTH ANNIVERSARY OF THE
NAVY HOSPITAL CORPS

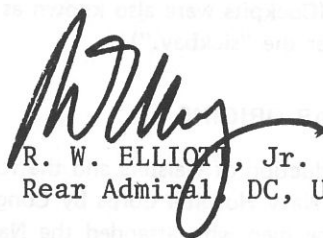
17 June 1974

On the occasion of the 76th Anniversary of the Navy Hospital Corps, it gives me great pleasure to extend my personal best wishes and hearty congratulations, those of the officers of the Navy Dental Corps and those of the men of the Dental Technician rating.

The valor and fidelity with which the members of the Navy Hospital Corps served is marked by the many honors, both individual and collective, that have been accorded them in peace and on the field of battle.

I am sure that the future will be as rewarding as you continue to seek new and innovative methods of meeting the demanding challenges and responsibilities that await you.

Happy Anniversary!


R. W. ELLIOTT, Jr.
Rear Admiral, DC, USN

Navy Allied Health Science Program

By RADM Edward J. Rupnik, MC, USN
Assistant Chief for Planning and Logistics
Bureau of Medicine and Surgery, Washington, D.C.

The Navy Medical Department has long recognized the need for using allied health professionals to assist the physician in delivering health care to active and retired Navy personnel, and their dependents throughout the world. Although no records are available that pinpoint precisely when or where nonprofessional medical personnel were first used in the Navy, we know that the need for individuals other than physicians to care for the sick and injured was recognized as early as the Revolutionary War, when virtually no enlisted men were trained in medical care. This need was met by detailing some of the least competent members of the ship's crew to perform nursing or attendant duties. Such men were commonly known as "waisters," a title that Hammersby's *Naval Encyclopedia* defines as "landsmen and worn-out seamen stationed in the waist of the ship." A waister's duties were primarily "to keep the cockpits scrupulously clean, well fumigated, and sprinkled with vinegar." (Cockpits were also known as the "sick berth," and later the "sickbay.")

AB ORIGINE

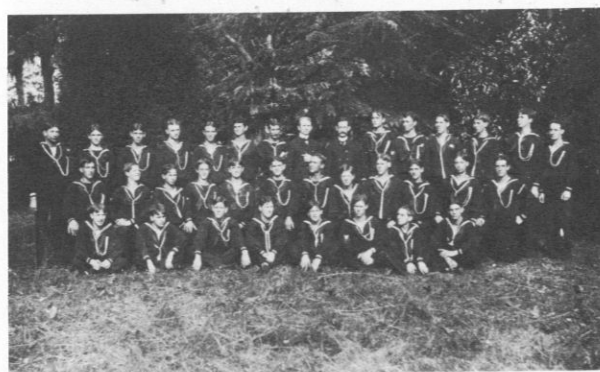
Between the introduction of waisters and the formal establishment of the Navy Hospital Corps by Congress on 17 June 1898, the men who attended the Navy's sick and injured were known by various titles, including

The author wishes to express appreciation to the personnel of the Curriculum Department, Naval Medical Training Institute, National Naval Medical Center, Bethesda, Md., for their valuable contributions in the research and organization of the material included in this article; and to the many anonymous contributors to NAVPERS 10816-C, *Medical Department Orientation*, from which a great deal of the historical source material for this article was obtained.

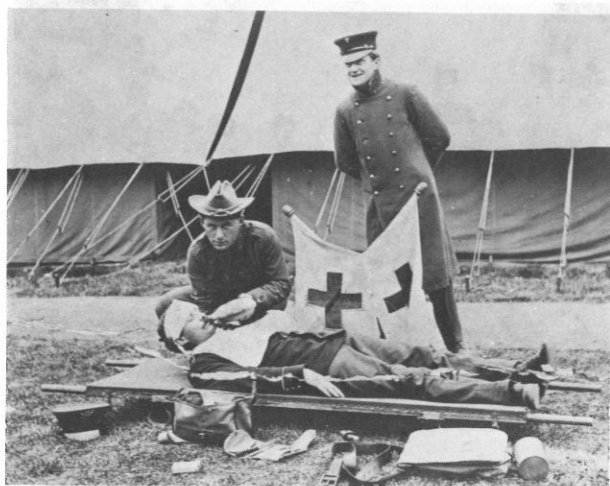
The opinions and assertions contained herein are those of the author and are not to be construed as official, or necessarily reflecting the views of the Navy Department or the naval service at large.

sick-bay attendant, steward, apothecary, nurse, bayman, hospital apprentice, and hospital steward. But the first apparently authentic designation was "loblolly boy." "Loblolly" was a name for gruel or porridge, so "loblolly boy" became a fitting name for one who carried the gruel about the ship.

According to the Naval Regulations of 1814, the loblolly boy's duties were: "... to serve the surgeon and the surgeon's mate. He will announce sick call in the morning by ringing the bell about the decks. He will feed, wash, and shave the sick." Before battle, the loblolly boy would: see that containers were ready to receive amputated limbs; prepare braziers of charcoal, to heat the irons used for searing the stumps and the tar used for stopping the hemorrhage; and make certain that there was plenty of sand to sprinkle about, so the surgeon would not slip and slide on the blood-soaked deck during surgery.



THE OLD SCHOOL.—The first Hospital Corps training school in military history was the School of Instruction (sometimes called "The Old School"), which opened at Nav Hosp Norfolk, Va., on 2 Sept 1902. From 1902 to 1911 the school graduated 20 classes of Navy hospital corpsmen. Pictured above is the first graduating class, with members of the school staff.



FIELD DRILL.—In 1902, members of the first graduating class of the Hospital Corps School of Instruction participated in a disaster drill in the field. Their course of study also included ward work, nursing, first aid, bandaging, operating-room and general-surgical nursing, anatomy and physiology, materia medica and pharmacy, hygiene, clerical work, and cooking.

After such an ignominious beginning, the lot of the hospital corpsman could only improve. Before 1798, surgeon's mates had been appointed to the rank of warrant officer; later they were advanced to commissioned officer status. Their duties were clearly defined in the rules and regulations of early naval service:

"(1) They shall be subject to the order of the surgeon. They shall weigh or measure every article of medicine and hospital stores issued. They shall keep a journal of the diseased, and treatment of all cases, an abstract of which shall be given to the surgeon so that he may report thereon to the Secretary of the Navy at the expiration of every cruise.

"(2) They shall be careful to see that the medicines prescribed are administered as directed and that the sick are supplied with proper nourishment. They shall be particularly careful in directing the loblolly boy to keep the cockpit clean, and every article therein belonging to the Medical Department. They shall, under the direction of the surgeon, personally apply dressings to wounds and ulcers; perform the operation of blood-letting; and in all important cases, they are personally to administer the medicines prescribed or see them given; and do all other duties appertaining to their profession which the surgeon may direct.

"(3) They must direct the orderlies to wash all bandages and compresses daily in hot water with soap or potash and see that they are returned clean and dry to the cockpit.

"(4) In the absence of the surgeon, the mate eldest in commission shall act as the surgeon. They shall

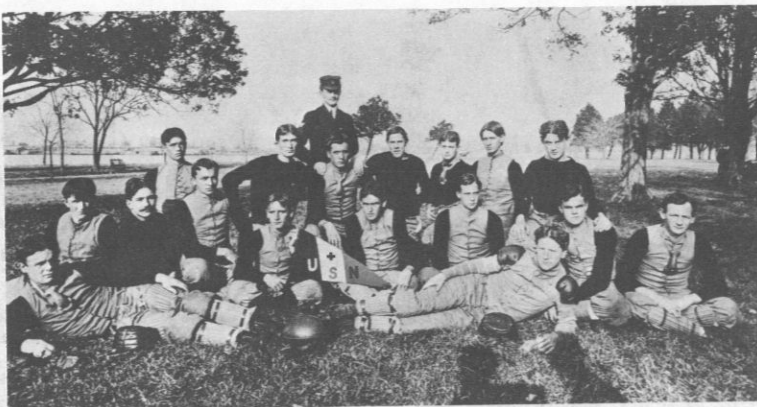


OSCAR.—More than 70 years ago, Oscar the Skeleton was already showing his age. Nevertheless, he helped many Navy hospital corpsmen to learn the rudiments of anatomy at the School of Instruction, Nav Hosp Norfolk, Va.



TRAINEES.—Students at the Hospital Corps School of Instruction were trained in operating-room-nursing techniques. The school was inaugurated in 1902 for the sole purpose of training young men for nursing and first-aid work in a military organization.

TEAM SPIRIT.—During the early years of the Hospital Corps School of Instruction at Portsmouth, Va., these students took time off from their classes to carry the Navy fighting spirit to nearby football fields.



do likewise in preparing the necessary reports required by the Rules and Regulations of the Navy."

PROVIDING FRONT-LINE CARE

Hospital corpsmen have distinguished themselves in every war and foreign expedition in which the United States has been involved. In World War II, in which 97 percent of wounded Navy and Marine Corps personnel recovered, 1,724 corpsmen gave their lives while providing front-line care. At Iwo Jima, Navy medical corpsmen suffered proportionately more casualties than did the Marines; two corpsmen were awarded the Medal of Honor in that historic battle.

During the Korean War, 99.4 percent of the wounded recovered. In one three-week period during the Inchon-Seoul operation, Navy corpsmen cared for 2,844 casualties. Of seven Medals of Honor awarded Navy personnel during that war, five were bestowed upon hospital corpsmen. Three Navy corpsmen, who contributed to the treatment of more than 300,000 men wounded in action in Vietnam, were awarded the Medal of Honor (two, posthumously).

EDUCATION AND TRAINING

Where does the Navy find candidates for training as hospital corpsmen? The answer is simple: they are all volunteers. Some enlist directly into the Hospital Corps, others are selected by qualification interviews at the Recruit Training Depot, and still others are Marines who request medical training and duty.

The education and training of Hospital Corps personnel are accomplished through service schools, in-service and out-service training programs, and correspondence courses. The service schools are classified as Class "A" or "C." The Hospital Corps no longer has a Class "B" school; its curriculum has been included in the Class "C" school, and the students are now being trained as

medical service technicians. Individuals who graduate from the Medical Service Technician School, and who have some practical experience are certainly prime candidates for the Navy Physician's Assistant Program.

The Class "A" or basic Hospital Corps School prepares corpsmen for a variety of duties normally encountered in their first enlistment, with emphasis on the nursing care of patients. The Class "C" school provides training which leads to the rating of technicians in some 30 specialties such as X-ray or laboratory, and aviation, submarine, amphibious, or field medicine.

For the past few years, we have been exploring the feasibility of establishing a training program based on an inventory or analysis of task statements. Through this system-analysis type approach, we hope to train the individual, particularly the general duty corpsman, for the tasks he will be required to perform when assigned to the field. As a result of our studies, we have redesigned the basic Hospital Corps School into two phases: phase one, to prepare the corpsman for the nursing care of patients in a specific hospital environment; and phase two, to prepare the corpsman to accomplish a variety of duties encountered in a non-hospital environment such as Fleet Marine Force, dispensary, ship, and so forth.

Each year approximately 5,000 corpsmen attend the basic or "A" school, and approximately 2,500 students continue on to a technical school. Those seeking such advanced training must receive above-average performance ratings; competition among individual applicants is keen.

OBTAINING ACADEMIC CREDIT

The Armed Forces have been criticized in the past because some corpsmen have not had professional certification or credentials at the time of their discharge or retirement from active duty, and have therefore been unable to secure a civilian job for which they were

exceptionally well trained and well qualified. Because we recognize that Navy programs must provide the same opportunities that civilian programs offer their students, we have developed a number of approaches to procure academic credit for our corpsmen.

Through one particular method, a part-time service training program sponsored by the Bureau of Medicine and Surgery, 75 percent of the cost of tuition, books, and fees in accredited civilian institutions is provided; such courses must be directly related to the student's Medical Department duties, or be a necessary part of a program leading to a degree.

We also attempted to obtain accreditation for our training programs through local colleges, usually at the community-college level. Our attempts have met with

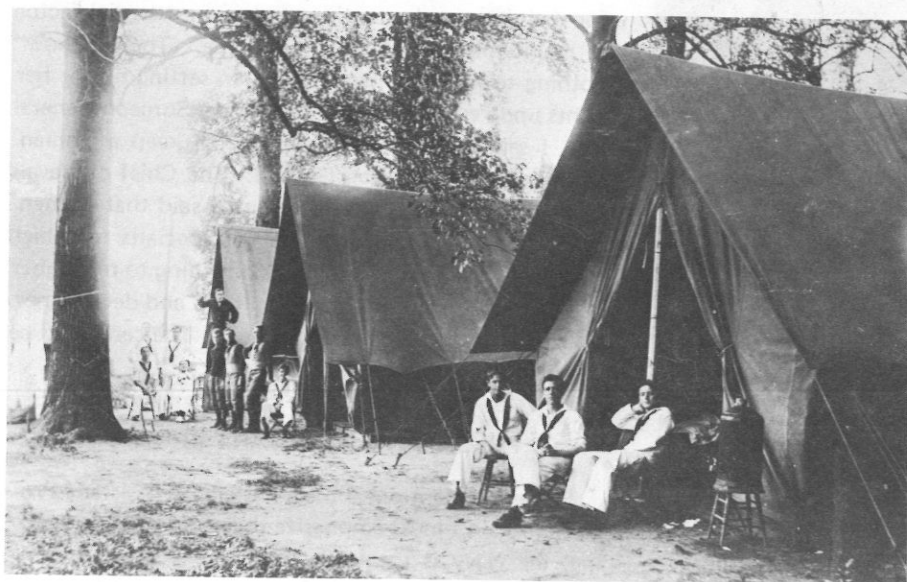
varying degrees of success depending upon the enthusiasm of the individuals, the hospitals, and the schools.

A major breakthrough to date was the signing of an agreement with The George Washington University, Washington, D.C., whereby the University will grant academic recognition to certain Navy Medical Department enlisted training programs. The establishment of this agreement with a large university, instead of with a local community college allows easier, more acceptable transfer of academic credits. Another advantage is the application of The George Washington University academic umbrella to technical training programs in the health sciences throughout the Navy.

The George Washington University now grants up to 54 credits for training in the X-ray Technology Program



TURN OF THE CENTURY.—These Navy hospital corpsmen were assigned to duty at Nav Hosp Norfolk, Va., in 1903. Seated second from the right is Hospital Apprentice Max Armstrong, who received the first certificate of instruction ever issued to a Navy hospital corpsman. Armstrong subsequently received an M.D. degree from the Indiana College of Medicine.



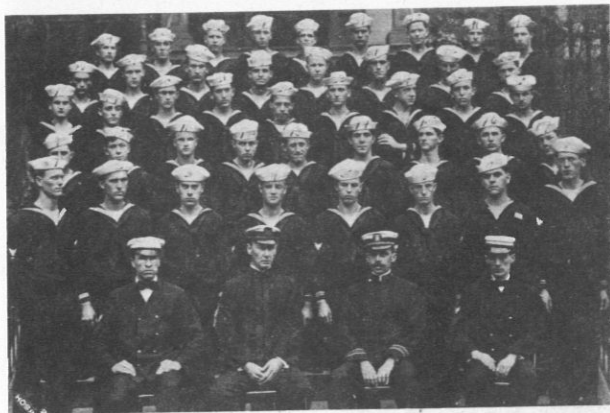
TENT QUARTERS.—In 1909, hospital corpsmen set up tent quarters around Nav Hosp Norfolk, Va.

at the Naval Medical Training Institute, Bethesda, Md., as well as for similar programs at Naval Hospitals San Diego and Portsmouth, Va. These credits may be applied toward either an associate degree or a baccalaureate degree, depending on the number of credits which the student has previously earned. The laboratory technician, medical services technician, and nuclear medicine technician training programs have also been approved for academic accreditation.

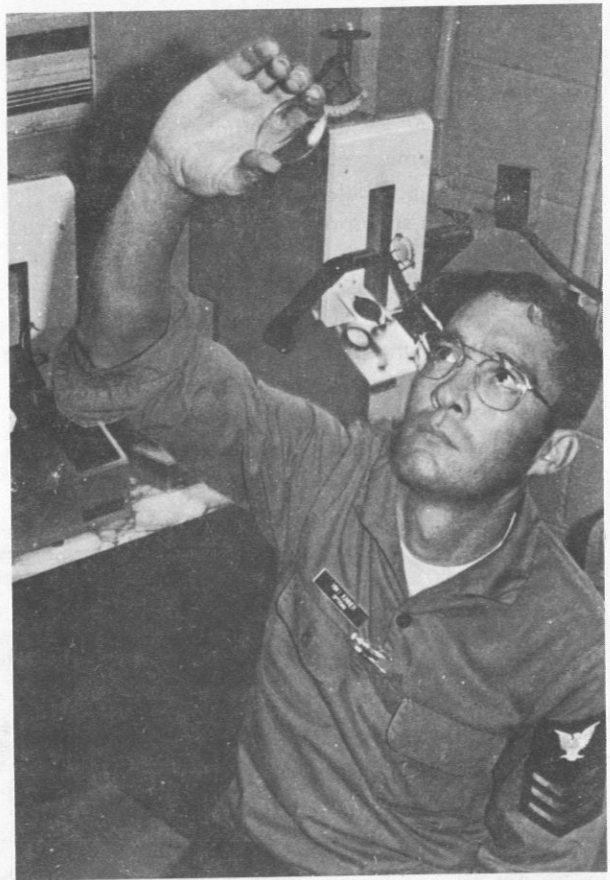
Ultimately we hope to have all of our technician training programs approved for academic accreditation. We view this development as a tremendous incentive



NEW HOME.—In 1907, after graduating 13 classes of students, the School of Instruction moved from Norfolk to Washington, D.C.; an additional six classes were trained at the new location before the school was closed in 1911. Pictured above on the steps of the Washington Naval Hospital is the 16th graduating class. Hospital Apprentice First Class Edward Guy Dennis (top left, leaning against iron balustrade), a graduate of this class, eventually advanced to the rank of commander, and during WWII became Chief of the Hospital Corps.



20TH CLASS.—This was the last class to graduate from the School of Instruction before it closed in 1911. During its nine years of operation, the school graduated 20 classes; 777 men attended the course of instruction, with 585 of them receiving certificates of graduation. In 1914, two new Hospital Corps training schools were opened, one at Naval Training Station, Newport, R.I., and the other at Yerba Buena Island, in connection with the Naval Training Station, San Francisco, Calif.



ZERO DEFECTS.—HM1 Juan G. Kinner examines a lens for defects before mounting it in frames. The modern-day hospital corpsman is assigned to Subic Bay Naval Hospital in the Republic of the Philippines, where he is in charge of the only single vision-fabrication facility in the Western Pacific. (Photo by JOSN J. Hansell).

for recruiting and retention, and as an essential factor in maintaining an all-volunteer force. There is now nothing to keep a new recruit from setting his, or her sights upon eventually becoming Navy Surgeon General. Yes, I said *she*. There is nothing to keep a woman from becoming Surgeon General. The Chief of Naval Operations made that clear when he said that women could pursue any noncombatant job specialty for which they were qualified. The important thing to remember is that Navy men and women can train and develop new skills while remaining on active duty. The career lattice has been constructed.

PHYSICIAN'S ASSISTANT PROGRAM

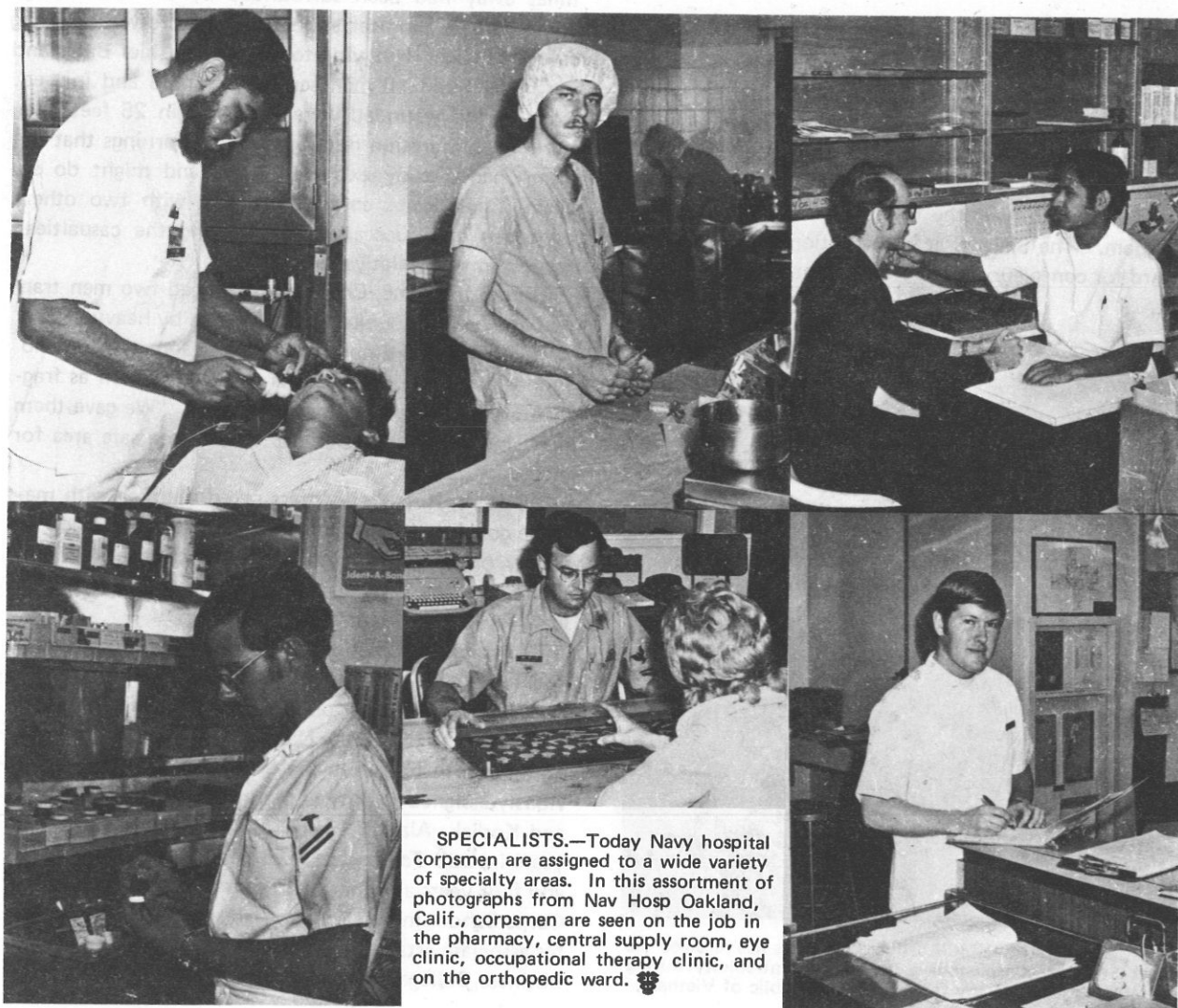
Earlier, I mentioned the Physician's Assistant Program. Again I must emphasize that, historically speaking, the Navy is the leader in training allied health

science personnel. Until recently, however, no matter how intelligent or well trained our corpsmen were, they could not be recognized as professionals and could not be certified. We have now taken the necessary steps to enable them to obtain professional credentials and stature.

A number of well-qualified hospital corpsmen are now training at the U.S. Air Force School of Health Care Sciences, Sheppard Air Force Base, Texas, in a program which can ultimately lead to a bachelor's degree. Their curriculum includes anatomy, medical terminology, human growth and development, pharmacology, laboratory procedures, radiology, chemistry, clinical medicine and surgery, physical diagnosis, and physiology. After completing the academic portion of their training, these prospective physician's assistants are

assigned to a naval hospital for practical, on-the-job instruction, to complete the two-year training program.

And so we have traced the evolution of the Navy hospital corpsman, from the uneducated waister and loblolly boy to the modern physician's assistant, who either has or is well on his way to earning an academic degree. Whether the physician's assistant decides to make a career of the Navy's Allied Health Science Program or returns to civilian life, he will carry with him academic recognition by a fully accredited university. His training represents a wise expenditure of the taxpayers' dollar, for even if this highly trained individual is lost to the Navy, his talents can benefit the civilian sector. In the acute crisis precipitated by the Nation's health-care-delivery problems, Navy physician's assistants represent a vital resource.



SPECIALISTS.—Today Navy hospital corpsmen are assigned to a wide variety of specialty areas. In this assortment of photographs from Nav Hosp Oakland, Calif., corpsmen are seen on the job in the pharmacy, central supply room, eye clinic, occupational therapy clinic, and on the orthopedic ward.

Hospital Corpsmen Honored for Outstanding Service

The history of the Navy Hospital Corps is studded with numerous stirring accounts of outstanding service and devotion to duty. In the 1970s this tradition of exceptional achievement still thrives. Honored in recent months for their particular contributions, four hospital corpsmen have again displayed the courage, initiative, and generosity that distinguish the men and women of their Corps.

SILVER STAR RECIPIENT

HMCM Gilyard H. Bates of the First Force Service Regiment, Camp Pendleton, Calif., has been awarded the Silver Star in recognition of his courage, skill, and dedication to duty in the face of heavy enemy fire in Vietnam. The Silver Star is the nation's third highest award for conspicuous gallantry and intrepidity in combat.



SILVER STAR.—HMCM Gilyard H. Bates has received the Silver Star for conspicuous gallantry and intrepidity during operations against enemy forces in the Republic of Vietnam.

Chief Bates was serving in Vietnam as battalion aid station chief with the First Battalion, Fifth Marine Regiment, First Marine Division when, on 7 Jan 1968, he and his battalion came under intense enemy mortar fire. Chief Bates rendered immediate first aid to the 72 men wounded in the attack, and supervised their evacuation for further medical care.

Word then arrived that the district headquarters ten miles away had been surrounded by the Viet Cong, and that heavy mortar and small-arms fire were causing severe damage. Hurrying to the scene, Chief Bates and his team found 40 men seriously burned and injured. Four of the wounded were lying within 25 feet of a burning ammunition dump. Despite warnings that the dump had already exploded twice and might do so again, Chief Bates entered the area with two other corpsmen and succeeded in removing the casualties to positions of relative safety.

During this time, Chief Bates noticed two men trapped in a built-up bunker, pinned down by heavy beams. "I removed the timber from the trapped men, and found they had broken backs and legs, as well as fragmentation wounds," the Chief recalls. "We gave them first aid, and then we removed them to a safe area for medevac."

At dawn, Huey helicopters raked the area with machine-gun fire, forcing the enemy to retreat. Once the enemy broke contact, medical evacuation operations began, and the wounded were carried to military medical facilities for treatment.

The men in Chief Bates' family have traditionally "gone Navy": his father enlisted in 1927, and four brothers served in the years following the Korean conflict.

Chief Bates joined the Navy in 1950, and is currently on his fourth tour with the Marine Corps. He was previously assigned to duty at Marine Barracks Crane, Ind., and Kodiak, Alaska. His career has also included three years in USS *Tombigbee*, two years in USS *Ilokomin*, and four years as senior instructor at the Naval Hospital Corps School in San Diego, Calif. In 1970, he earned his associate arts degree in data processing at San Diego Business College.

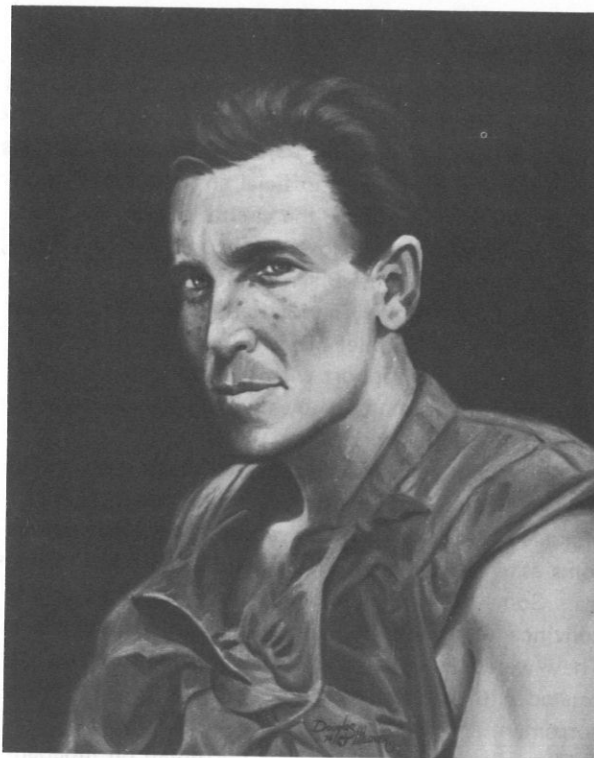
Chief Bates has served at Camp Pendleton since Nov 1972. "Duty with the Marine Corps is the greatest duty a sailor could ask for," he says. "It's been my best and most enjoyable duty in the Navy, and I recommend it to all young corpsmen."

POSTHUMOUS HONOR

A new dining hall for enlisted personnel at Naval Station San Diego, Calif., has been named in honor of HM2 William I. Mercer, who was killed by enemy fire while serving as a senior corpsman in Vietnam.

HM2 Mercer was assigned to Company M, Third Battalion, Fourth Marines, Third Marine Division, in the Republic of Vietnam. On 15 June 1968, while he and his battalion were engaged in heavy conflict with the North Vietnamese Army, he maneuvered across a hazardous area to provide medical care for his injured comrades. Mercer shielded the wounded Marines with his own body, attended to their wounds, and carried them to safer areas. While he was administering first aid, the young corpsman was fatally wounded by North Vietnamese fire. For his extraordinary heroism, HM2 Mercer was awarded the Navy Cross posthumously.

The dining hall named in his honor was dedicated on 1 March 1974. Mercer Hall stretches over 33,000 square feet; it cost nearly \$1,900,000 to create. The hall has three cafeteria-type dining areas that are served by four mess lines capable of handling up to 4,300 people a day.



NAVY CROSS.—HM2 William I. Mercer, posthumous recipient of the Navy Cross, was cited for extraordinary heroism while serving as senior hospital corpsman in Vietnam.



MERCER HALL.—A new dining hall for enlisted personnel at Naval Station San Diego, Calif., has been named in honor of HM2 William I. Mercer. PO Mercer was killed while administering first aid to a wounded Marine in Vietnam. (Photo by JO2 C. Campbell).

SHOWCASE FOR AMERICA

While deployed to Northwest Africa with the Navy's Hurricane Hunters, a weather reconnaissance unit supporting NASA's Gemini flights, HMC Elwyn D. McFalls found time to act as an unofficial ambassador of good will for 40 days in Dakar, the capital of Senegal. His only credentials were a love for people and the Navy, and intense pride in his Black heritage.

Gregarious, friendly, and gifted with a facility for expressing himself, Chief McFalls quickly succeeded in establishing a fine rapport with the residents of Dakar. His curiosity was matched by the people's eagerness to learn more about America and Americans.

"Some perceptive folks discovered that a showcase of American democracy was right before them," Chief McFalls observes. "But," he adds, "a few incredulous folks asked if it was really that bad for Blacks in America. Some took a close, hard look, touching me to convince themselves that I was really flesh and blood. They were surprised that a Black American was entrusted with a responsible job, such as doctor, nurse, corpsman, and pharmacist to a crew of 40 men."

Some Senegalese saw a Black corpsman on independent duty as a symbol of prestige attainable only in America. In fact, the Assistant to Senegal's Prime Minister told Chief McFalls he was glad to see that Black Americans had come such a long way.

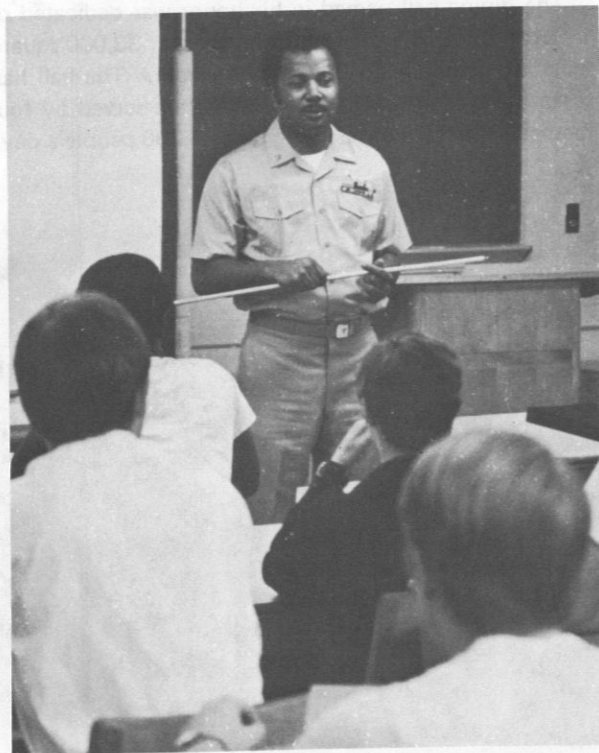
Chief McFalls' regard for people comes naturally, but sometimes it proves to be literally painful in the neck. When the Chief's Moslem hosts excused themselves to pray at sunset, he instinctively assumed a reverential stance — standing stiff, with head bowed. While Allah's worshippers prostrated themselves towards the holy city of Mecca for about 20 minutes, Chief McFalls developed a nasty stiff neck that he had to nurse for days. "I didn't mind my shipmates poking fun at my neck, for the experience was well worth all the trouble," he remarks.

Chief McFalls' visit to Africa whetted his appetite for more involvement in the Navy's race relations and human resources development programs. His chance came when the commanding officer of the carrier USS *Roosevelt* appointed him special assistant in the formulation of a command-action plan.

The Vietnam veteran's pursuit of professional excellence has kept pace with his other activities. On 22 Feb 1974, he was awarded the Navy Achievement Medal in recognition of his superior performance of duty while serving as Chief Petty Officer in charge of the Aviation Medicine Section in USS *Roosevelt*, from 1970 to 1972. Impressed by the Chief's ability to take charge, his division officer commented: "He has done a superior



NAVY ACHIEVER.—The Navy Achievement Medal is pinned on HMC Elwyn D. McFalls by CAPT Robert C. McDonough, MC, USN, Commanding Officer, Naval Aerospace Medical Institute, Pensacola, Fla. HMC McFalls received the award for outstanding service as chief petty officer in charge of the Aviation Medicine Section in USS *Roosevelt* from 1970 to 1972.



BACK HOME.—After a 40-day deployment to Northwest Africa with the Navy's Hurricane Hunters, HMC Elwyn D. McFalls is back in the classroom at the Naval Aerospace Medical Institute, Pensacola, Fla. Chief McFalls is an instructor of aerospace medicine technicians.

job in management of enlisted personnel He is firm, but just, and succeeds in getting the most from his men."

As an instructor of aerospace medicine technicians at the Naval Aerospace Medical Institute, Pensacola, Fla., Chief McFalls combines depth of knowledge and style of presentation, holding the interest of the students. Along with other instructors he helps the technicians to become the "right arms" of Navy flight surgeons, dedicated to keeping Navy and Marine crews flying safely and effectively.

BARKER PARK

Sometimes a hospital corpsman makes such an impression that kudos follows him into his retirement years. That's exactly what happened to HMCS Gene A. Barker, who retired in 1973 after 28 years of naval service. Last April, the Chief of Naval Operations authorized the dedication of a softball field at Camp Pendleton, Calif., in honor of the Vietnam veteran whose imagination turned fire-ravaged ruins into an area for recreation.

Senior Chief Barker was a staffer at NAVREGMED-CEN Camp Pendleton in 1971, when fire destroyed the station's bachelor enlisted quarters. He requested and received permission to build a softball field on the site of the ruins, and set to work in true "can-do" style. The fence around the field was built with old, supposedly unserviceable wood, which he obtained through Special Services. The field was filled and rough-leveled with equipment, offered at no cost by a construction contractor already working on a project for the Medical Center. Chief Barker, members of the softball team, and other interested people at the Medical Center spent many after-duty hours leveling and grading the field, until they had produced the best playing surface available in the entire Camp Pendleton area.

After the field was completed, as a number-one patching ace and head coach Chief Barker led the Medical Center team to victory, capturing the 1972 Marine



BARKER PARK.—Retired HMCS Gene A. Barker (center) and his wife, Margene, receive congratulations from CAPT E.D. Loweecey, MC, USN, commanding officer of NAVREGMED-CEN Camp Pendleton, Calif., at the dedication of Barker Park, the new softball field at the Base. Senior Chief Barker was the guiding force behind the planning and construction of the field.

Corps Base softball championship. His team was undefeated throughout the regular-season play during 1973, but lost the championship that year to the Security Battalion.

"Barker Park" stands today as an appropriate tribute to a man who exemplifies the positive attitude and initiative so typical of Navy hospital corpsmen. They're not only the backbone of the Medical Department, they're the spirit of it; and that's what really counts when the chips are down. Most of us learn that the first time out, and hopefully never forget it. 🍀

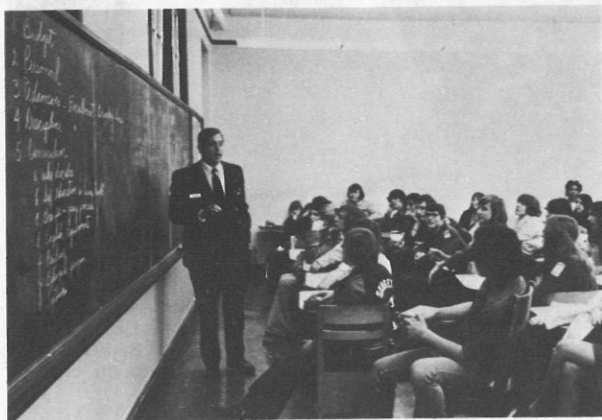
A SPECIAL KIND OF CORPSMAN

Only two Navy enlisted men currently on active duty hold the Medal of Honor. One of them is Master Chief Hospital Corpsman William R. Charette, USN, a crewmember of the *Polaris* submarine *Simon Bolivar*.

HMCM Charette was honored for his valor while serving as a corpsman with the 1st Marine Division during the Korean conflict. Bachelor enlisted quarters at NAS Charleston, S.C., were named in his honor in 1969. 🍀

ON THE ROAD WITH "DOC"

Meet Paul "Doc" Beaudoin — a hospital corpsman first class who serves in the front lines of one of the Nation's biggest battles. Doc is one of a number of



DOC.—HM1 Paul "Doc" Beaudoin talks with Texas high-school students about the problem of drug abuse. Doc regularly visits schools that request assistance from Navy drug teams.

Navy volunteers specially trained at the Navy Drug Abuse Education School in San Diego, Calif., to assist commands in developing effective drug education and action programs.

Drug abuse has existed throughout the history of man, and continues to plague nearly all societies today, including the Navy. Although it can never be completely eliminated, drug abuse can be minimized. This is the objective of the Navy's three-phase drug and alcohol education program, of which HM1 Beaudoin is a part.

Phase I of the program is designed to provide drug information to each command, and initial two-day training workshops for command-selected drug education representatives. This training is conducted by

drug abuse education specialists and drug education consultants.

Phase II provides for in-depth training by drug abuse education specialists. Recipients of this training are the command drug education representatives, as well as drug abuse program officers and advisers, and other selected command personnel.

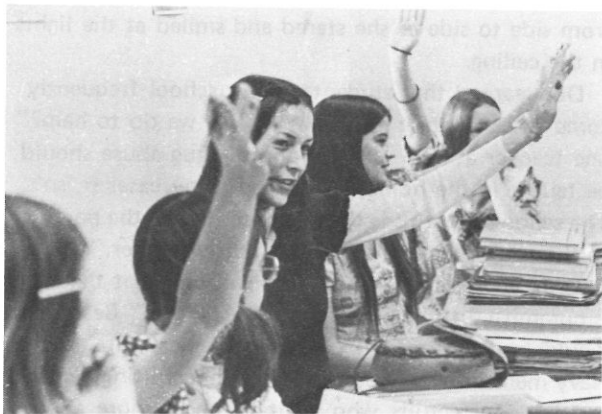
Phase III consists of on-site follow-up assistance coordinated by the Navy's human resource development centers. In this phase, drug abuse education specialists personally assist individual commanding officers by assessing command drug and alcohol education programs, revising the programs as necessary, and providing additional on-site training. During Phase II, the drug abuse education specialist also provides facts for the commanding officer to use in developing and managing the best possible drug education program for his organization.

The Navy wants to make sure that every man has the facts he needs to make an intelligent decision about drug abuse; the drug abuse education program is designed to reduce the pressure and opportunities for drug abuse, and to help men who are caught in the downward spiral of drug abuse so that, wherever



INFORMAL.—HM1 Beaudoin keeps his rap sessions small and informal, creating a comfortable environment for students to discuss their problems.

Story idea and photographs by JO2 Chuck Bigler, USN, Navy Recruiting District, Dallas, Tex.



TEXAS TEENAGERS.—Teenagers in a Dallas high school have lots of questions for HM1 Beaudoin. The Navy drug abuse education specialist provides insight into drug abuse and human relations problems.

possible, they may return to satisfying positions in the Navy. To help achieve these goals, the Navy established the Drug Abuse Education School at San Diego, Calif., in 1971, to train drug abuse education specialists. The graduates of this school not only assist Navy drug teams, but also support civilian organizations that request assistance as a public service.

It was to provide this public service that Doc Beaudoin recently hit the road in Texas to talk to high-school students about drug abuse and rehabilitation. Doc had completed the five-week training program at the Drug Abuse Education School, where he was taught the nature and effects of various drugs, studied the psychology of man as an individual and as a member of a group, and learned to recognize characteristics of social organizations and the drug subculture. He was also trained in the skills he would need to analyze problems, and learned how to identify alternative methods of solving the difficulties encountered. Finally, he acquired facility in listening attentively to others, understanding and responding appropriately to their prevailing emotions of hate, love, confusion, and rebellion.

Doc also attended the Texas Alcohol and Narcotic Seminar at Baylor University in Waco, Texas, and is currently a premedical major at Tarrant County Junior College, Fort Worth, Texas.

Doc's training in drug abuse education, his natural sense of humor, and his relaxed manner before an audience make him an ideal counselor to enlighten students about drugs. In the past two years, he has crisscrossed North Texas countless times to direct more than 200 "rap sessions" with students, civic organizations, Boy Scouts, Sea Scouts, and other youth

organizations in the Dallas recruiting district where he is assigned.

In his most recent two-week tour, Doc traveled several hundred miles to talk with students at four high schools near Dallas. The first session was held at a suburban high school with an enrollment of nearly 1500 students. Doc talked to an all-girl health class. None of the girls appeared to have any major drug problem, but many said they enjoyed imbibing alcohol. The girls who drank said they did so because "It's fun," "It gets you drunk," or "It makes you feel good"; but other students rejected alcohol, and gave good reasons for their opposition. Doc then asked two students to summarize on the blackboard the sentiments expressed by members of the class, both for and against drinking. Using the process of elimination, he zeroed in on what appeared to be the most significant student justification for drinking, and spent considerable time discussing this line of reasoning with them.

The following week Doc spoke at two small high schools some 140 miles south of Dallas. The first school was attended by about 250 students, nearly half of them White; the other half, Black and Mexican-American. Although Doc ordinarily prefers to hold a series of small group sessions because he feels it is easier to communicate with the students this way, the entire ninth, tenth, eleventh, and twelfth-grade classes had gathered together in the school gymnasium to hear him speak on this occasion.

After the maxi-session with the entire student body, Doc stopped by the classrooms to talk with the teachers. One young teacher said she was upset with the faculty's lack of training in the vital areas of drug abuse and human relations. "Kids go to teachers with questions about drugs, sex, or whatever," she said, "and the



MEANWHILE BACK AT THE OFFICE.—When he is not on the road serving as a drug abuse education specialist, HM1 "Doc" Beaudoin can be found at his desk in the Naval Recruiting District, Dallas, attending to the medical needs of the Navy men and women assigned to his district.

teachers don't have an intelligent answer. The teachers here have no concept of drug abuse, for example. The kids don't want to go to their parents with these questions because they say their parents may suspect them of something." It is precisely this communication gap that drug abuse education specialists like Doc try to fill.

At the next high school, located in a predominately Black community in a small southeast Texas town, Doc drew a blank at both of the rap sessions which he conducted. Some communities, he has found, simply will not open up to strangers. The students at this school were not willing to reveal anything about their use of drugs to an outsider like Doc.

But the students at his final session in a school with a predominantly Mexican-American student mix, were more responsive. Doc paid special attention to a young girl obviously high on drugs, who attended the session; she moved in slow motion, her head swaying

from side to side as she stared and smiled at the lights in the ceiling.

Doc learned that students at this school frequently come to class while high. "What can we do to help?" one teacher asked. "Prevention of drug abuse should be taught in the home, but in too many cases it isn't. The schools feel this is the responsibility of the parents, so the subject isn't discussed in school, either."

Drug abuse is a national problem, one that the Navy is committed to helping solve. HM1 "Doc" Beaudoin would be busy enough providing medical care to the Navy men and women assigned to his recruiting district, and helping recruits who want to know more about career opportunities in Navy medicine. But Doc — and the Navy Medical Department that supports him — travels that extra mile; week after week he's on the road spreading the word about good health, and freedom from drug dependency. ☸

ATHLETE'S FOOT TROPHIES



HOOFING IT.—Winners of the Fellowship of Organized Treaders (FOOT) contest, all members of the Physical Therapy Department of NAVREGMEDCEN Newport, R.I., proudly display their silver and gold foot trophies. The FOOT contest was held at the medical center 11-15 Mar 1974, to save energy and promote physical fitness by encouraging people to walk to work. The five winners walked a total of 220 miles during the contest. Pictured from left to right are: HM3 Gary Cook, USN; HM2 James Cropper, USN; LT Pamela Hoovler, MSC, USNR; HM3 Kenneth Denault, USN; and HN Ronald Selander, USN. — PAO, NAVREGMEDCEN Newport, R.I. ☸

SCHOLARS' SCUTTLEBUTT



ATTENTION SCHOLARSHIP STUDENTS

Many of you, our readers, are currently enrolled in medical and osteopathic schools throughout the country, under the sponsorship of one of the Navy's Health Professions scholarships. As students in these programs, and as future physicians in the Navy, it is natural that questions and problems will arise for which you may require guidance. In addition, the Navy Bureau of Medicine and Surgery (BUMED) is desirous of providing you with all necessary information to facilitate the realization of your educational goals, and their integration into the needs of the Navy Medical Department. As with any program, the fulfillment of mutual goals depends upon communication between those involved.

With this issue of *U.S. Navy Medicine* we are establishing a "Scholars' Scuttlebutt" section. We will use it to present information regarding policy, programs, and guidance in those matters of the Navy Medical Department which are of importance to you. We hope that you will contribute to this effort, and provide us with articles reporting your experiences in Navy clerkships, cruises, or indoctrination courses that may be of interest to other scholars. A two-way forum is envisioned.

With this first effort, we are reproducing the Bureau directions for application, and a listing of the first-year Graduate Medical Education positions which the Navy

will offer for the training year 1975-1976. A similar package has been sent to each student who is eligible to apply this year. — CAPT W.M. McDermott, Jr., MC, USN; BUMED Code 316-1.

NAVY GRADUATE MEDICAL EDUCATION (GME)

The Navy has discontinued seeking first-year trainees under the National Intern and Resident Matching Program. In lieu of the matching operation, directors of specialty programs in all naval hospitals will convene in Washington, D.C., to select their own trainees. Scheduled dates of action are:

- 1 Sept 1974 — Closing date for receipt of applications in the Bureau of Medicine and Surgery.
- Sept 1974 — Selection process in the Bureau.
- 21 Oct 1974 — Notifications of selections or nonselections will be mailed to all candidates. (This date may be advanced if administrative procedures permit.)

The first-year GME positions available in the Navy during the 1975-1976 training year are listed in Table 1. (Recent revisions in the application form and number of available training positions are reflected in this publication.)

Also provided for use only by students in their last year of medical or osteopathic school, is an application form for Graduate Medical Education in the Navy (See Figures 1 and 2). Additional information concerning the specific programs of your choice can be obtained by contacting directors of medical education at the various naval hospitals concerned (See Figure 3).

It is the responsibility of each student to arrange for the dean of his or her medical or osteopathic school to forward a copy of the student's up-to-date transcript and a letter of recommendation. Additional letters of recommendation can be forwarded directly to the Chief, Bureau of Medicine and Surgery (Attention: Code 316), Navy Department, Washington, D.C. 20372.

Students in the Armed Forces Health Professions Scholarship Program *are required* to apply for training in the Navy. They are also required to list all the hospitals that offer the specific training program or programs for which they have applied. Hospitals that are not so listed will be added by the selection committee.

AMA/AOA PLACEMENT PLANS

All scholarship students should prepare themselves for the contingency that numerical limitations may

TABLE 1

**SPECIALTY AND NUMBERS OF PROGRAMS OFFERED IN GRADUATE MEDICAL EDUCATION TO GRADUATING STUDENTS
DURING THE 1975 - 1976 TRAINING YEAR**

NAVAL HOSPITAL	ANES C/CD/F	DERM C/CD/F	FAM.P C/CD/F	IN.MED C/CD/F	NEURO C/CD/F	OBGYN C/CD/F	OPHTH C/CD/F	ORTHO-S C/CD/F	OTO C/CD/F	PATH C/CD/F	PEDS C/CD/F	PSYCH C/CD/F	RADIO C/CD/F	SURG C/CD/F	URO C/CD/F	TOT
CAMP PENDLETON, CA	- - -	- - -	6 - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	6
CHARLESTON, SC	- - -	- - -	6 - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	6
JACKSONVILLE, FL	- - -	- - -	6 - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	6
PENSACOLA, FL	- - -	- - -	4 - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	4
BETHESDA, MD	- - 2	- - 1	- - -	4 4 -	- - 2	3 - -	- - 2	- - 2	- 1 -	3 - -	3 - -	4 - -	- - 2	3 2 -	- - 1	39
OAKLAND, CA	- - 2	- - -	- - -	4 3 -	- - -	3 - -	- - 2	- - 2	- 1 1	2 - -	3 - -	3 - -	- - 2	2 2 -	- - 2	34
PHILADELPHIA, PA	- - 2	- - 2	- - -	6 2 -	- - -	2 - -	- - 2	- 1 1	- - 2	- - -	2 - -	4 - 1	- - 3	2 - -	- - 1	33
PORTSMOUTH, VA	- - 2	- - -	- - -	6 6 -	- - -	6 - -	- - -	- - 3	- - -	2 - -	5 - -	- - -	- - -	4 - -	- - 2	36
SAN DIEGO, CA	- - 4	- - 2	- - -	12 - -	- - -	4 - -	- - 3	- 4 -	- - 3	3 - -	5 - -	- - -	- 3 4	- 4 2	- - 2	55
TOTAL	1 2	5	22	47	2	18	9	1 3	8	1 0	1 8	1 2	1 4	2 1	8	219

KEY:

C = Categorical: 12 months in a single discipline. Programs in Peds, Path, OBGYN, Psychiatry and Family Practice are first-year residencies/internships.

CD = Categorical diversified: at least 6 months in the specialty under which listed plus other rotations.

F = Flexible: at least 4 months in medicine plus other rotations.

— = that particular type of program is not offered at that specific hospital.

SPECIALTY ABBREVIATIONS:

ANES = Anesthesiology, DERM = Dermatology, FAM.P = Family Practice, IN.MED = Internal Medicine, NEURO = Neurology, OBGYN = Obstetrics/Gynecology, OPHTH = Ophthalmology, OTO = Otolaryngology, ORTHO-S = Orthopedic Surgery, PATH = Pathology, PEDS = Pediatrics, PSYCH = Psychiatry, RADIO = Radiology, SURG = Surgery, and URO = Urology.

SPECIAL NOTE: Categorical programs in Peds, Path, OBGYN, Psych, and Family Practice are first-year residencies/internships. Upon reporting for duty, all other trainees will be advised how they can apply for training to continue beyond the first-year level.

Address: _____

Subj: Graduate Medical Education; application for
(for use only by students in their last year of medical or osteopathic school)

Encl: (1) Physical condition statement

1. It is requested that this letter be considered as my application for the training program(s) that are listed below *in the order of my preference*:

[illegible]

INSTRUCTION — Under "PROGRAM" specify Categorical, Categorical Diversified, or Flexible. Under "SPECIALTY" indicate the discipline under which the program appears in the listing of programs available (Table 1). Under "HOSPITAL PREFERENCE" list the hospitals, from left to right in order of preference, which offer the program desired.

Figure 1.—Application for Navy Graduate Medical Education

2. Enclosure (1), the statement of my physical condition, is forwarded for inclusion in my file.
3. Under separate cover I shall have the dean of my school provide an up-to-date transcript of my grades and a letter of recommendation. I understand that additional letters of recommendation can be forwarded to the Bureau of Medicine and Surgery at the address previously indicated in this letter (Figure 1).
4. In the event a training position is not available for me in a naval hospital, it is requested that I be granted a deferment of my active service obligation until I shall have completed training in a civilian institution as noted below (applicable only to students in the Armed Forces Health Professions Scholarship Program, or civilians.)

Specialty: _____

To be completed on: _____

5. I understand that if I am not selected for training in a naval hospital and I am not granted a deferment to complete a full specialty-training program in a civilian institution, my active service will be delayed for one year only while I complete one year of graduate medical education in a civilian institution. At the end of that period I will be called to active service. (Applicable only to students who hold appointments in Navy student programs.)

Signature

Telephone Number

(Exact date of anticipated graduation-Month-Day-Year)

This additional space can be utilized to provide the selection committee with any special information you desire to have considered.

Figure 2.—Application for Navy Graduate Medical Education (Cont.)

Names of medical education directors at various naval hospitals are provided below as contacts for further information concerning the program at their respective hospitals:

LOCATION	TELEPHONE	DIRECTORS/ASSISTANT DIRECTORS
*NRM C Charleston, S.C.	(803) 743-5670	LCDR R. Higgins, MC, USN
*NRM C Camp Pendleton, Ca.	(714) 725-3310	CDR J.W. Norton, MC, USN
*NRM C Jacksonville, Fl.	(904) 722-2201	LCDR J.C. Baggett, Jr., MC, USNR
*NH Pensacola, Fl.	(904) 452-4411	LCDR T.F. Harrington, MC, USN
After 1 July 1974 address inquiries to: Director of Medical Education		
NRM C Portsmouth, Va.	(804) 397-6541	CAPT N.G. Lewis, MC, USN CAPT J.P. Collier, MC, USN
NRM C San Diego, Ca.	(714) 233-2022	CAPT R.F. Milnes, MC, USN CAPT R.G. Fosburg, MC, USN
NRM C Oakland, Ca.	(415) 639-0111	RADM R.L. Baker, MC, USN CDR V.L. Goller, MC, USN
NNMC Bethesda, Md.	(202) 295-0274	RADM W.J. Jacoby, MC, USN CAPT R.J. Van Houten, MC, USN
NRM C Philadelphia, Pa.	(215) 755-8232	CAPT R.L. Mullin, MC, USN CDR J.F. McGrail, MC, USN

Contacts at the Bureau of Medicine and Surgery, Washington, D.C. are:

Mr. C.B. Mohler	(202) 254-4339
CAPT W.M. McDermott, Jr., MC, USN	(202) 254-4280
CAPT S. Barchet, MC, USN	(202) 254-4279

*Family Practice programs only.

Figure 3.—Helpful Contacts for Information on Medical Education

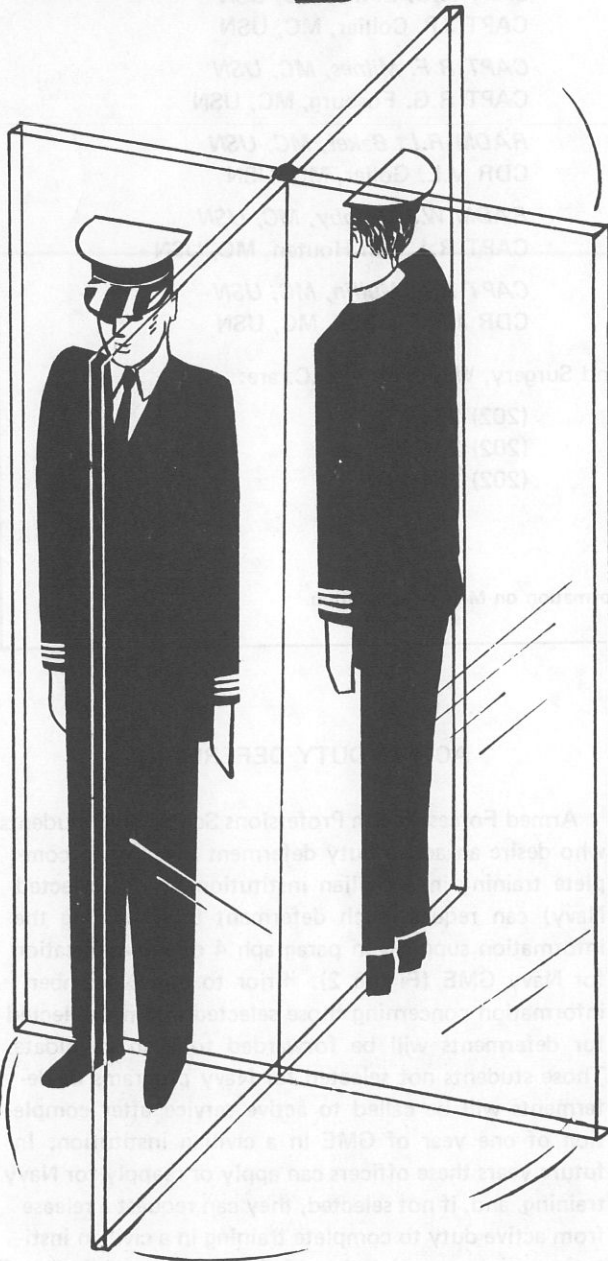
(Cont. from page 23)

preclude their selection for first-year programs in naval hospitals. In preparation for that contingency they are urged to register at the appropriate time with the National Intern and Resident Matching Program (AMA), or the Intern Registration Program of the American Osteopathic Association (AOA). Of course, if a student desires to seek training on his own (*if not selected Navy*), he or she is free to do so. Those students who are selected for Navy Programs and who may have registered with one of the intern placement plans will withdraw from that plan upon notification of selection by the Navy. As in the past, the Navy will continue to offer unfilled first-year positions to qualified students who do not obtain positions under the AMA or the AOA placement plans. Information concerning such vacancies will be available each year after the AMA or AOA placement announcements.

ACTIVE DUTY DEFERMENT

Armed Forces Health Professions Scholarship students who desire an active duty deferment in order to complete training in a civilian institution (if not selected Navy) can request such deferment by providing the information supplied in paragraph 4 of the application for Navy GME (Figure 2). Prior to mid November, information concerning those selected and not selected for deferments will be forwarded to each candidate. Those students not selected for Navy programs or deferments will be called to active service after completion of one year of GME in a civilian institution. In future years these officers can apply or reapply for Navy training and, if not selected, they can request a release from active duty to complete training in a civilian institution prior to completion of their training obligation.

Coming and Going



CAPT RL ALSPACH, MC, USN

From: Nav Hosp Boston, Chelsea, Mass.
To: CO Nav Hosp Boston, Chelsea, Mass.
(May to disestablishment)

CAPT DC BEER, MC, USN

From: CO Nav Hosp Memphis, Tenn.
To: Retirement (Jul)

CAPT DP BERNARD, MC, USN

From: CO NRMIC Guam MI
To: Retirement (Jun)

CAPT CW BRAMLETT, MC, USN

From: Deputy Director NRMIC Charleston, S.C.
To: CO Nav Hosp Beaufort S.C. (May)

CAPT FW BURKE, MC, USN

From: CO Nav Hosp Annapolis, Md.
To: Nav Hosp Orlando, Fla. (Dec 1973)

CAPT GE CRUFT, MC, USN

From: CO NRMIC Philadelphia, Pa.
To: Retirement (Jun)

CAPT CM GARLAND, MC, USN

From: CO USS *Sanctuary*
To: Chief of Outpatient Services, Nav Hosp
Orlando, Fla. (Apr)

CAPT PC GREGG, MC, USN

From: CO Nav Hosp Cherry Point, N.C.
To: CO Nav Hosp Pensacola, Fla. (May)

CAPT JW HAUZENBLASS, MC, USN

From: Nav Hosp Portsmouth, N.H.
To: CO Nav Hosp Portsmouth, N.H. (Jun)

CAPT JC HODGES, MC, USN

From: CO Nav Hosp Beaufort, S.C.
To: Senior Medical Officer, Annapolis Naval
Academy, Md. (May)

CAPT JT HORGAN, MC, USN

From: Director Clinical Services NRMIC
Portsmouth, Va.
To: CO NRMIC Jacksonville, Fla. (Jun)

CAPT RE KINNEMAN, JR., MC, USN

From: Naval Medical Research Institute, NNMIC,
Bethesda, Md.
To: CO Nav Hosp Rota Spain (Jul)

CAPT NP KITRINOS, MC, USN

From: XO Nav Hosp Oakland, Calif.
To: CO Nav Hosp Annapolis, Md. (Dec 1973)

CAPT CE KEE, MC, USN

From: CO NRMCMC Long Beach, Calif.
To: Inspector General, Medical, BUMED (Jun)

CAPT RM LEHMAN, JR., MC, USN

From: CO Nav Hosp Taipei, Taiwan
To: CO Nav Hosp Memphis, Tenn. (Jun)

CAPT WT LINEBERRY, MC, USN

From: CO NRMCMC Bremerton Wash.
To: District Medical Officer, 8th Naval District (Jun)

CAPT GJ MC CLARD, MC, USN

From: CO Nav Hosp Guantanamo Bay, Cuba
To: Director Clinical Services, Quantico, Va. (Jun)

CAPT RC MC DONOUGH, MC, USN

From: CO Naval Aerospace Medical Institute, Pensacola, Fla.
To: Retirement (Jul)

CAPT CH MILLER, MC, USN

From: CO NAMRU-4
To: Retirement (Jun)

CAPT WF MINER, MC, USN

From: Officer in Charge, EPMU-7
To: CO NAMRU-3, Cairo, Egypt (May)

CAPT CC MUEHE, MC, USN

From: Senior Medical Officer, NS Mayport, Fla.
To: CO NRMCMC Guam, MI (May)

CAPT AD NELSON, JR., MC, USN

From: CO Nav Hosp Rota, Spain
To: Senior Medical Officer, Marine Corps Air Station, Yuma, Ariz. (Jul)

CAPT HP PARISER, MC, USN

From: CO Nav Hosp Subic Bay, ROP
To: CO NRMCMC Bremerton, Wash. (Jul)

CAPT ER PETERS, MC, USN

From: CO NRMCMC Camp Lejeune, N.C.
To: Retirement (Jul)

CAPT WM PHILLIPS, MC, USN

From: Marine Corps Base, 29 Palms, Calif.
To: CO Nav Hosp USS *Sanctuary* (May)

CAPT T RICHTER, MC, USN

From: CO Naval Medical Research Institute, NNMC, Bethesda, Md.
To: CO NRMCMC Camp Lejeune, N.C. (Jun)

CAPT EP RUCCI, MC, USN

From: XO NRMCMC Camp Pendleton, Calif.
To: CO NRMCMC Long Beach, Calif. (May)

CAPT JM SANDERLIN, MC, USN

From: Director Clinical Services, Nav Hosp Orlando, Fla.
To: CO Nav Hosp Guantanamo Bay, Cuba (Jul)

CAPT KW SELL, MC, USN

From: Naval Medical Research Institute, NNMC, Bethesda, Md.
To: CO Naval Medical Research Institute, NNMC, Bethesda, Md. (May)

CAPT JH STOVER, MC, USN

From: CO Nav Hosp Portsmouth, N.H.
To: Retirement (Jul)

CAPT GH TARR, JR., MC, USN

From: CO Nav Hosp St. Albans, N.Y.
To: Retirement (Jul)

CAPT HS TROSTLE, MC, USN

From: Director, Aerospace Medicine Operations Division, BUMED 51
To: CO Naval Aerospace Medical Institute, Pensacola, Fla. (Jul)

CAPT PFD VANPEENEN, MC, USN

From: Officer in Charge, Djakarta Detachment NAMRU-2
To: CO NAMRU-2 (Jul)

CAPT RH WATTEN, MC, USN

From: CO NAMRU-2, Taipei, Taiwan.
To: NRMCMC San Diego, Calif. (Jul)

CAPT MG WEBB, MC, USN

From: CO Nav Hosp Quonset Point, R.I.
To: CO Nav Hosp Cherry Point, N.C. (Apr)

CAPT NV WHITE, MC, USN

From: CO Nav Hosp Pensacola, Fla.
To: CO Nav Hosp Taipei, Taiwan (Jun)

CAPT AC WILSON, MC, USN

From: Director Planning Division, BUMED
To: CO NRMCMC Great Lakes, Ill. (May)

CAPT SA YOUNGMAN, MC, USN

From: NAS North Island, Calif.
To: CO Nav Hosp Subic Bay, ROP (Jun) 🌸

THE GASTROENTEROLOGISTS' CORNER

Colonoscopy—A Direct Approach to the Study of Colon Pathology

By LCDR Otto T. Nebel, MC, USNR*
Naval Hospital San Diego, California.

Fiberoptic endoscopy has revolutionized our diagnostic approach to disease of the gastrointestinal tract. Upper gastrointestinal lesions can be visualized, photographed, and biopsied in essentially all cases, and certain lesions are even amenable to endoscopic removal.^{1,2} A high level of diagnostic effectiveness and excellent patient acceptance have established upper gastrointestinal endoscopy as a routine procedure in many hospitals.

Fiberscopes designed to visualize the colon have been more difficult to develop.^{3,4} However, recent advances in mechanical design have resulted in clinically useful colonofiberscopes developed by several manufacturers. These instruments are available in most of our large naval hospitals (See Figure 1), and patients referred for colonoscopy from smaller facilities are becoming more numerous. The purpose of this paper is to review the clinical application of these new instruments.

The study reported herein was supported by the Bureau of Medicine and Surgery, Department of the Navy Clinical Investigation Control Center under Work Unit No. 3-16-029.

*Gastroenterology Branch, Medical Service, and the Clinical Investigation Center, Nav Hosp San Diego, Calif. 92134.

The opinions or assertions expressed herein are those of the author and are not to be construed as official, or reflecting the views of the Department of the Navy or the naval service at large.

HISTORY

The successful development of the gastrocamera in 1950 made photographic screening for gastric carcinoma feasible. It was anticipated that this instrument might be used to photograph lesions of the colon, and Matsunaga and co-workers modified a gastrocamera (Colono-Camera) to obtain photographs through rigid sigmoidoscopes.⁵ Later, after successive improvements, these authors extended the range of examination to include the proximal colon. While spectacularly successful in selected cases, this new instrument failed to achieve general acceptance because of its mechanical limitations and unpredictability in obtaining photographs of colonic pathology.

In 1957 the introduction of the fiberscope suggested an alternative to the colono-camera, and work was directed toward the problems of mechanical design necessitated by the many bends of the colon. Early attempts to use modified, forward-viewing esophagogastrosopes inserted over a previously placed guide wire were moderately successful, but tended to be tedious and uncomfortable for patients.⁶

Finally, in 1969, several manufacturers introduced fibercolonoscopes that allowed direct colonic visualization without the need of guide wires. The colonoscope

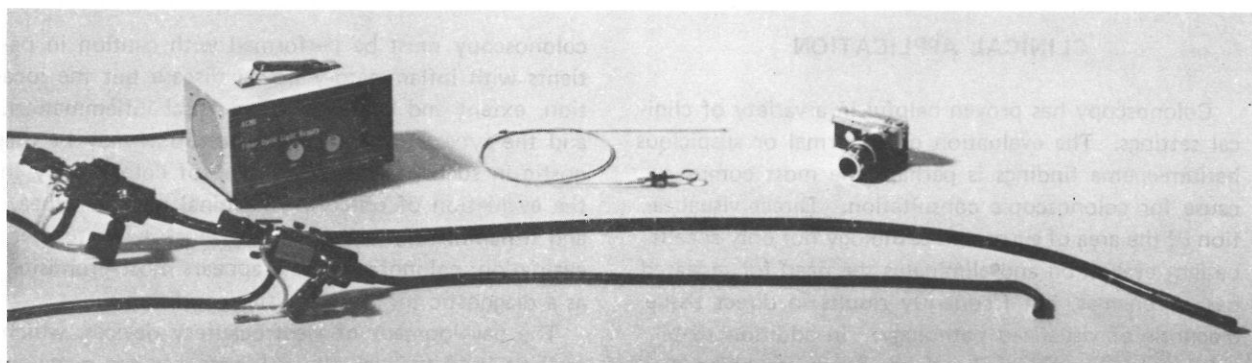


FIGURE 1.—Colonoscopy equipment: long (top), and medium-length (bottom) ACMI colonoscopes; light source; biopsy forceps, and; endoscope camera.

had come of age! Subsequent improvements have included more complete tip control, larger biopsy channels, and an increase in length to allow complete colon visualization.⁷

INSTRUMENTS AND TECHNIQUE

Fibercolonoscopes are available from the Olympus and Machida Corporations of Japan, and the ACMI Corporation of this country. Information about the specific features of individual instruments is readily available from the manufacturers, and will not be reviewed here. However, there are some general features common to all instruments which are fundamental to an understanding of their clinical application.

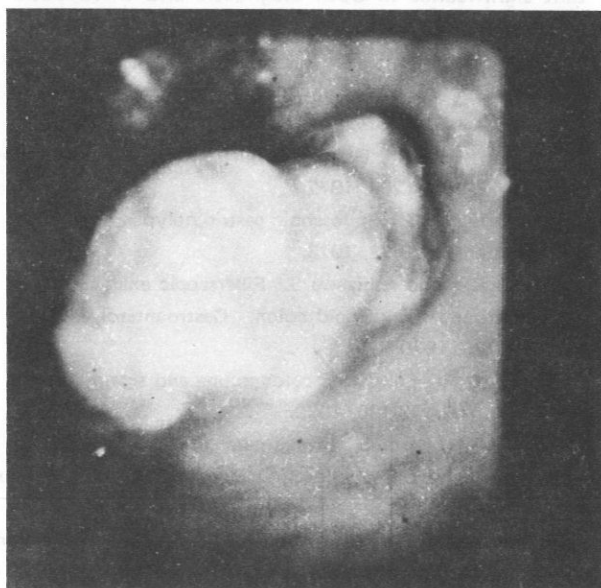


FIGURE 2.—Endoscopic photograph obtained through an Olympus colonoscope demonstrates a colonic polyp caused by colonic schistosomiasis.

Colonoscopes are forward-viewing fiberscopes with marked distal flexibility to negotiate the sigmoid colon. They come in two lengths (100 and 200cm), and feature photographic and biopsy capabilities (See Figure 2). While the 200cm instrument is essential for proximal-colon visualization, it tends to be somewhat harder to use, and is subject to more frequent malfunction than the shorter (100cm) instrument. The fact that most colon pathology is within reach of the shorter fiberscope has popularized the 100cm colonoscope for routine use. The recent development of endoscopic electrosurgical procedures stimulated the introduction of colonoscopes, with large or multiple biopsy channels, which permit easier passage of biopsy and electrocautery accessories. Clinical efficacy of these new instruments must await more extensive experience.

Preparation for colonoscopy is a most important aspect of the procedure, and many acceptable methods have been proposed. We generally recommend a clear liquid diet for two days prior to the procedure, and a cathartic administered on the day before the procedure. Enemas are given until clear returns are observed, on the night before and the day of the procedure. This regimen usually results in a colon free of stool. Although many endoscopists administer no premedication for colonoscopy, we prefer to use meperidine, atropine and diazepam.

With the patient lying on his or her left side, the colonoscope is inserted directly into the rectum. The examination is usually done without moving the patient, but in selected patients repositioning may facilitate passage of the instrument. The colonoscope is advanced under direct vision without the aid of a guide wire or fluoroscopy. Although endoscopic landmarks and transabdominal light may help in determining endoscope location, we have found fluoroscopy or abdominal X-ray study to be the most reliable means of accurately determining the position of the endoscope.

CLINICAL APPLICATION

Colonoscopy has proven helpful in a variety of clinical settings. The evaluation of abnormal or suspicious barium-enema findings is perhaps the most common cause for colonoscopic consultation. Direct visualization of the area of suspected pathology not only speeds patient evaluation and eliminates the need for repeated barium enemas, but frequently results in direct tissue diagnosis of visualized pathology. In addition to biopsy, colonic cytology by direct brush scrubbing or lavage is available, and may prove useful in the evaluation of selected lesions. The ability to visualize specific areas of the colon depends to a large extent on the location of the area in question, and the endoscopist's experience. However, with experience, lesions of the colon can be visualized in approximately 90% of cases.⁷

The use of colonoscopy to evaluate acute colonic bleeding has been disappointing. Inability to evacuate colonic contents through the endoscope, and to keep the lens clean, are the main obstacles to successful colonoscopy in these patients. Because of these technical problems, we do not routinely employ the colonoscope in evaluating patients with acute colonic bleeding. However, the endoscopic examination of patients with intermittent hematochezia is another matter. Currently all patients seen in our unit for hematochezia receive colonoscopic examination shortly after the bleeding has ceased. The endoscopic findings, both positive and negative, have proved helpful in the management of these patients. Colonic lesions not diagnosed by barium-enema studies, such as bleeding colonic polyps and Crohn's colitis, have been diagnosed only through colonoscopy. In addition, a normal colonoscopic finding has occasionally been as significant clinically as the finding of pathology. An excellent example of this dictum is a particular patient who was thought to have diverticulosis, and who presented a colonic polypoid mass on emergency barium-enema examination conducted because of hematochezia. Colonoscopy demonstrated only diverticulosis, and a repeat barium-enema study failed to confirm the presence of the colonic mass. These clinical developments dampened surgical enthusiasm and allowed the successful medical treatment of this poor-risk patient. Preliminary data suggest that colonoscopy should be performed on all patients who present hematochezia and normal barium-enema X-ray findings.

The colonoscopic evaluation of obscure abdominal pain and diarrhea has proved to be minimally rewarding. Conversely, colonoscopy has frequently been helpful in the evaluation of patients with inflammatory bowel disease. Because of the danger of perforation,

colonoscopy must be performed with caution in patients with inflammatory bowel disease but the location, extent and character of mucosal inflammation, and the type and location of ulceration may be diagnostic in such patients. The role of colonoscopy in the evaluation of obscure abdominal pain, diarrhea, and inflammatory bowel disease must await further evaluation; colonoscopy now appears most promising as a diagnostic tool in the latter condition.

The development of electrocautery devices, which may be used through the colonoscope, has made the entire colon accessible to endoscopic electrosurgery. The lesion is encircled by the wire snare, which is closed, with simultaneous application of high frequency electric current. The lesion is thereby separated and blood vessels are coagulated. The snare is then withdrawn and the lesion removed. Although no mortality, and only occasional morbidity have been reported, the theoretical complications of bleeding and perforation must be remembered.⁸ A thorough understanding of both colonoscopy and the principles of high frequency electrocautery are essential for those planning to perform this procedure.⁹

We perform colonoscopic polypectomy in all patients with pedunculated colonic polyps, and our experience supports the position that this is the treatment of choice for removal of pedunculated colonic lesions. The suitability of colonoscopic removal of more sessile lesions has not been established, but it is being actively investigated.

In conclusion, colonoscopy has achieved an important significance in both diagnostic and therapeutic areas of patient care.

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3. Sakai Y and Ashizawa S: Fiberscopic examination of the rectum and the sigmoid colon. *Gastroenterol Japonica* 5(4):281-286, 1970.
4. Turell R: Fiberoptic colonoscope and sigmoidoscope. *Am J Surg* 105:133-136, 1969.
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7. Classen M: Progress report: Fiberendoscopy of the intestines. *Gut* 12:330-338, 1971.

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A CLOSER LOOK AT COLON PATHOLOGY (Comment by our Gastroenterology Editor)

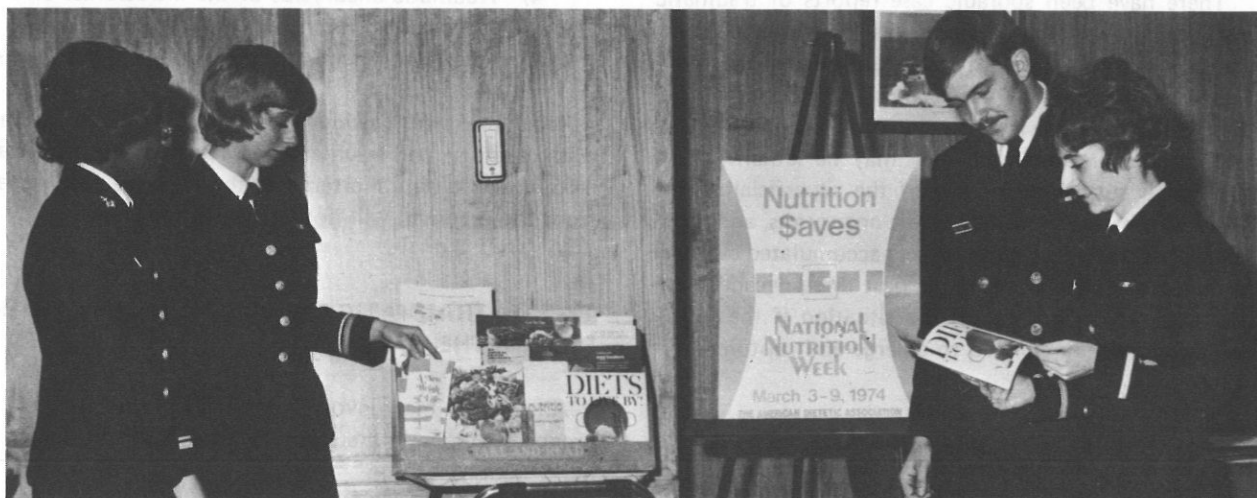
The growth of diagnostic modalities in clinical gastroenterology has been particularly rapid in the past few years due to the great technological advances in the use of fiberoptic instrumentation. Gastroenterologists now are equipped with the capability of visually examining the upper gastrointestinal tract almost to the ligament of Treitz, and examining the lower tract up to and even past the ileocecal sphincter. The article by LCDR Nebel in this issue of *U.S. Navy Medicine* summarizes some of the recent advances in the diagnostic and therapeutic use of the long colonoscope by the modern gastroenterologist. It seems important to emphasize that the availability of study of the large intestine from end-to-end characterizes all of the large teaching hospitals in the U.S. Navy. In fact, a position of leadership in the application of new diagnostic procedures in gastroenterology has become the hallmark of Navy medicine over recent years. This has been particularly demonstrated in recent publications by LCDR Nebel on the application of recent advances in

duodenoscopy for managing the patient with upper gastrointestinal bleeding, or for study of the pancreatic or biliary tracts.

We would be remiss if we did not recognize at this time one of the major reasons for the frontier position of Navy medicine in the field of gastroenterology, that is, the support given to teaching and research through the Navy's Clinical Investigation Program. Clinical studies into the usefulness of the fiberoptic duodenoscope were initially encouraged and supported by Clinical Investigation Program (CIP) funding. From these studies, many of the advances in our further understanding of the usefulness of this technique were generated. At the present time the CIP is supporting continued clinical trials in the use of the fiberoptic colonoscope for both diagnostic purposes, and for the therapeutic removal of intestinal polyps. Additional support is currently being provided for an interhospital cooperative study in this area of gastrointestinal disease. In Navy gastroenterology we have seen the Clinical Investigation Program actively at work, performing its mission, to support the classical triad of patient care, teaching, and research.

CAPT Donald O. Castell, MC, USN
Chief, Gastroenterology Division, and
Chief, Clinical Investigation Service
Naval Regional Medical Center Philadelphia, Pa. 🇺🇸

NATIONAL NUTRITION WEEK



DIETITIANS DO THEIR THING.—LTJG Karen S. Hofmann, MSC, USN (second from left) and ENS Jeanne C. Scheurer, MSC, USN (far right) launch National Nutrition Week (3-9 Mar 1974) at NAVREGMEDCEN Great Lakes, Ill. Here HA Bonita Claiborn, USN (far left) and HA Daniel Jenkinson, USN (second from right) review informative brochures.

Promoting good nutrition is the primary aim of the dietitians, who use educational programs and dining room displays to make hospital personnel aware of nutritional fads and fallacies. They also encourage participation in the Nursing Service's reducing clinic, for which they act as advisers. — PAO, NAVREGMEDCEN Great Lakes, Ill. (Photo by HM1 Walt DeSelm, USN.) 🇺🇸

TRAUMATIC ANEURYSMS

Cranial and Intracranial

By CAPT Frederick E. Jackson, MC, USN,*
J.R.W. Gleave, FRCS,** and
Edward Janon, M.D.†

Traumatic aneurysms situated about, on, or within the cranium were formerly regarded as rare clinical conditions. With the advent of the newer techniques in neuroradiology, including high speed carotid and vertebral angiography, subtraction techniques, magnification radiology, and differential catheterization of carotid and vertebral arteries, it is becoming apparent that these lesions occur much more frequently than we had been led to believe.

There have been sporadic case reports of traumatic intracranial and cranial aneurysms in the past few years.^{1,2,3,4,5,6} It is time to identify and classify these aneurysms. The importance of understanding their natural history is underscored by the fact that, if undiagnosed or untreated, they may be lethal. This lethality is surprising in view of the superficiality of many of the intracranial traumatic aneurysms, and their relatively small size. However, the accumulated evidence in the medical literature of the past three decades demonstrates the seriousness of the situation if the intracranial variety are allowed to enlarge and rupture.

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The opinions or assertions contained in this paper are those of the authors, and are not to be construed as official or reflecting the views of the Navy Department or the naval service at large.

CLASSIFICATION

For purposes of classification, we shall subdivide traumatic cranial aneurysms into five distinct groups:

- 1) Traumatic aneurysms within the scalp
- 2) Traumatic aneurysms immediately adjacent to the cranial vault
- 3) Traumatic aneurysms of the arteries as they traverse the cranium
- 4) Traumatic aneurysms of the intracranial cerebral arteries
- 5) Traumatic aneurysms of the meningeal arteries

Traumatic *arteriovenous malformations*, which are a distinct entity, and traumatic aneurysms of the *proximal* carotid and vertebral arteries in the neck, at a distance from the cranium, will not be considered here.

TYPE 1. TRAUMATIC ANEURYSMS OF THE ARTERIES OF THE SCALP

Aneurysms may involve external carotid artery branches supplying the scalp, following penetrating or blunt injuries.

Scalp arterial walls have a well developed adventitia, muscular layer, internal elastic lamina and intima. Arterial aneurysms are quite distinct from the venous varices or cirroid arteriovenous shunts, and may arise following blunt trauma to the scalp.

Case Report 1-1

A Marine had a throbbing headache of several months' duration. He had sustained minor blunt trauma to the scalp three months previously. Examination revealed a 5mm pulsating mass on the scalp. A plastic catheter was placed in the proximal superficial temporal artery, and an angiogram was performed which visualized a traumatic aneurysm of the superficial temporal artery. Under local anesthesia the aneurysm was excised between ligatures, with subsequent relief of the localized headaches.

TYPE 2. TRAUMATIC ANEURYSMS ADJACENT TO THE CRANIUM

Aneurysms may result from damage to major and intermediate-size arteries in juxtaposition to the skull. The most commonly injured arteries are the carotid arteries at the base of the skull, but delayed bleeding as a result of rupture of a false aneurysmal sac may originate from ethmoidal arteries, primarily the anterior ethmoidal or sphenopalatine arteries.

Case Report 2-2

A young man was shot with a 0.25-caliber pistol in an altercation, the bullet shattering into many fragments at the base of the right foramen lacerum, at the entry of the carotid artery into the calvarium. Serial right carotid angiography revealed a 20 x 15 cm. false aneurysm of the right internal carotid artery, in juxtaposition to the cranium at the foramen lacerum. The aneurysm



MASS. GENERAL HOSP EMI SCANNER.—Under the famous Ether Dome, the author (far right) recently lectured at Mass. General Hospital, Boston, Mass., on "The Traumatic Cranial and Intracranial Aneurysms." During the visit, LCDR K. Davis, MC, USNR (in white coat), briefed the author on the new Serial Axial Computerized Tomography unit at Mass. General, where Dr. Davis now practices in neuroradiology.

was well delineated by X-ray subtraction techniques. The aneurysm was repaired by occluding the right internal carotid artery with a ligature in the neck, and clipping the right internal carotid artery proximal to the origin of the ophthalmic artery intracranially. No subsequent neurological sequelae were observed.

In time it may be possible to approach a false aneurysm in this area directly. With the present state of the surgical art, the best current treatment for extensive tissue damage resulting from trauma with multiple fragments in the area, and with the difficulty of obtaining distal extracranial control of the artery, would appear to be a trapping procedure for aneurysms of the internal carotid artery as the vessels enter the skull, with the distal clip placed on the intracranial carotid artery immediately below the ophthalmic artery.

TYPE 3. TRAUMATIC ANEURYSMS OF THE MAJOR ARTERIES AS THEY TRAVERSE THE CRANIUM

It is to Sir Hugh Cairns² that we are indebted for the first detailed description of traumatic aneurysms of the intracranial carotid artery. The great majority of reported cases of traumatic aneurysms of the intracranial carotid artery have followed blunt head injuries, associated with fractures of the base of the skull.⁴

The triad of *severe recurrent epistaxis of late onset, monocular blindness, and skull fracture extending into the basilar skull* is typical of a traumatic aneurysm of the internal carotid artery.

Case Report 3-3

A 19-year-old Marine was admitted to our hospital after having been wounded in Vietnam. He had been struck by multiple mortar fragments which passed through the left orbit, necessitating enucleation of the left eye. One fragment penetrated the left eye to lodge just to the right of the sella turcica. Six weeks post-trauma and three weeks after his return to CONUS, he began to have headaches and then experienced the first of three episodes of severe epistaxis.

Following the first epistaxis the initial carotid angiography study was normal, demonstrating no evidence of intracranial aneurysm formation. After his third episode of epistaxis, a subsequent carotid angiogram revealed filling of a large traumatic aneurysm arising from the infraclinoid portion of the right internal carotid artery. The aneurysm extended into the sphenoid sinus, completely filling the sinus. Following intracranial clipping of the internal carotid artery as it emerged from the cavernous sinus, coupled with ligation of the internal carotid artery in the neck, the patient made a gratifying

recovery. Subsequent right vertebral angiography revealed complete obliteration of the aneurysm. Filling of the right anterior and middle cerebral arteries was observed to take place via the patent posterior communicating artery in the circle of Willis.

The cranial nerves frequently involved by enlarging intracranial traumatic aneurysms of the internal carotid artery are: the oculomotor, olfactory, abducens, trigeminal, and trochlear nerves, in that order. *A cranial bruit is audible in half of the cases, usually heard over the orbit.* Epistaxis, or bleeding from the ear via the eustachian tube may be noted at the time of injury, but then usually decreases or stops, *only to recur massively several weeks after the injury.* The time interval between injury and recurrence of epistaxis has ranged from one week to nine months, although the average is four weeks.

It is interesting that when the delayed epistaxis occurs, as in our case report 3-3, it is seldom exsanguinating on the first episode; *but if the aneurysm remains untreated the epistaxis recurs, and a case fatality rate of over 50% can be expected.*

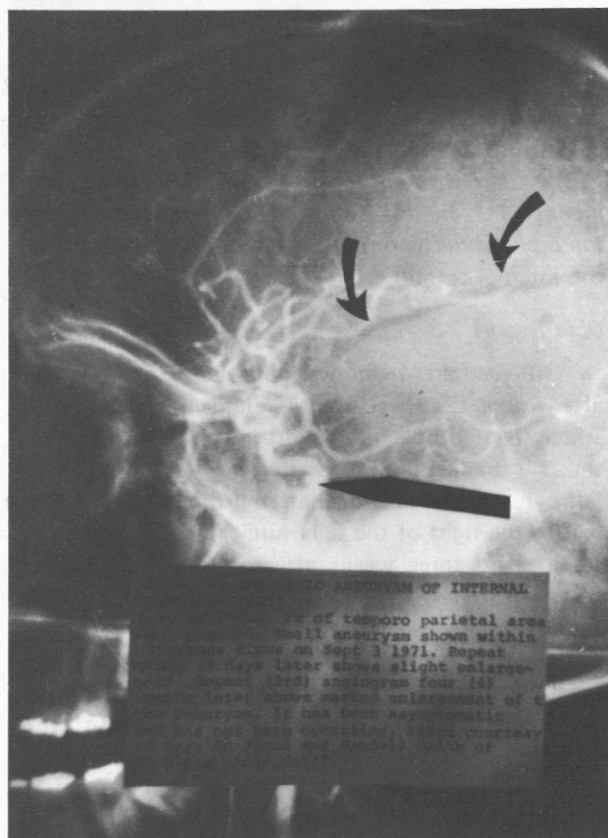


FIGURE 1.—A left carotid angiogram, lateral view, demonstrates a small bulge in the internal carotid artery at the level of the base of the posterior clinoid process, the beginning of a traumatic aneurysm (lower arrow). The curved arrows above point out a long linear fracture of the left parietal and temporal bones.

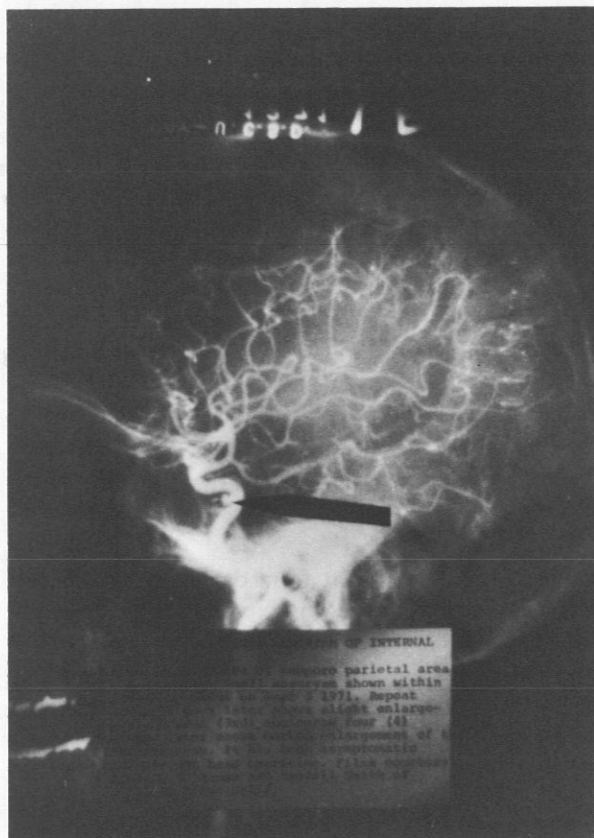


FIGURE 2.—Performed 18 days after the first (See Figure 1), this second left carotid angiogram reveals progressive enlargement (pointer) of the traumatic aneurysm involving the left internal carotid artery.

As a differential diagnostic point of significance, traumatic aneurysms of the internal carotid artery are not usually accompanied by pulsating exophthalmos. This fact helps to differentiate such aneurysms clinically from the traumatic carotid cavernous fistulae. Both lesions, however, may be associated with an intracranial *bruit*.

Case Report 4-3

A young male was involved in an automobile accident and incurred a linear fracture of the left parietal and temporal bones that extended down into the base of the skull. On the lateral roentgenogram, the fracture traversed the planum sphenoidale anterior to the anterior clinoid process, and penetrated the anterior sphenoid region into the ethmoidal areas at the base of the skull. A small traumatic aneurysm was visualized on the internal carotid artery, at the level of the cavernous sinus. (See Figure 1) The clinical course is quite remarkable in that progressive enlargement of the aneurysm was noted on three consecutive angiograms. Performed 18 days after the first angiogram, the second angiogram reveals slight enlargement of the internal carotid aneurysm. (See Figure 2)

A third angiogram performed four months following the second study (Figure 2) and 4-1/2 months post-trauma, demonstrates marked enlargement of the traumatic aneurysm. (See Figure 3)

TYPE 4. TRAUMATIC ANEURYSMS OF THE CEREBRAL ARTERIES

Aneurysms arising as a result of trauma may also affect the cerebral arteries, either on the surface of the brain or within the substance of the brain.

It is important at this juncture to describe the differences between the various types of traumatic aneurysms. A "true" aneurysm is produced when actual dilatation of the artery results from *partial disruption* of the arterial wall, with the internal elastic lamina often remaining intact. The wall of the artery dilates and aneurysm formation will occur, but histologic examination reveals persistence of the vessel-wall constituents.

"False" traumatic aneurysms, however, occur when the arterial wall is completely lacerated and local

hemorrhage ensues. If the hemorrhage is contained by local factors, i.e., external pressure, then the hematoma will undergo fibrous organization forming a "false" aneurysm that communicates with the lumen of the artery. The enlargement of this false aneurysm results from progressive absorption of laminations of clotted blood. When visualized at surgery, these "false" aneurysms are found to consist of a mixture of partly solidified, partly liquid blood clot, communicating with the lumen of the original artery.

If the strength of the intracranial arteries derives from the same layers of the thoracic aorta,^{3,6} then it is the adventitial layer that provides most of the tensile strength of intracranial arteries. Hence, in a true aneurysm in which the muscularis and intimal layers have been ruptured, the adventitia itself, by providing the greatest compressive strength, will prevent complete rupture of the aneurysm. When arterial walls have been completely destroyed by the forces of violence, then the wall of the aneurysm is formed by the surrounding tissue, which is usually brain in the case of intracranial arteries. This explains the propensity of these aneurysms, *particularly the false aneurysms, for bleeding when exposed*; unlike a congenital aneurysm, the walls of false aneurysms are much more friable and thin, and are formed by compressed and gliomatous brain tissue. Traumatic aneurysms *bleed spontaneously even more readily than do congenital aneurysms*. Fully one-half of all reported traumatic intracranial aneurysms have bled within 15 days of the injury, and hemorrhage proved to be fatal in 50% of these cases.

The corollary of these facts is that the development of a traumatic aneurysm should be very suspect if *a patient develops delayed subarachnoid hemorrhage subsequent to a head injury*. Once it is demonstrated by angiography, surgical correction of the traumatic aneurysm should be promptly undertaken in view of this marked propensity for bleeding, often fatally.

Case Report 5-4

A 12-year-old girl was involved in a road traffic accident on 23 May 1971. She sustained bruising and abrasions of her forehead and chin. She was allowed to return home after a fortnight spent in the hospital, and although she was steadily improving, a change in her behavior towards disinhibition and childishness was observed. On 17 June 1971 she began to complain of bouts of headache. On 19 June 1971 she suddenly became dizzy, had a very severe headache, fell unconscious to the floor, and was incontinent. She recovered shortly afterwards but headache and vomiting persisted, and she once more lapsed into unconsciousness. The youngster was therefore admitted to the

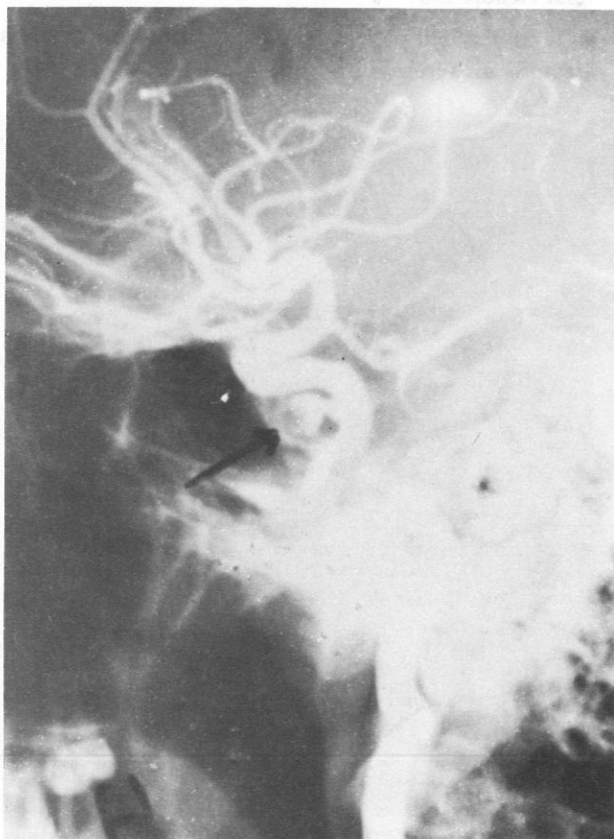


FIGURE 3.—A left carotid angiogram performed four months after the study shown in Figure 2, demonstrates marked enlargement of the left internal carotid artery aneurysm, with partial filling of the traumatic aneurysmal sac (arrow).

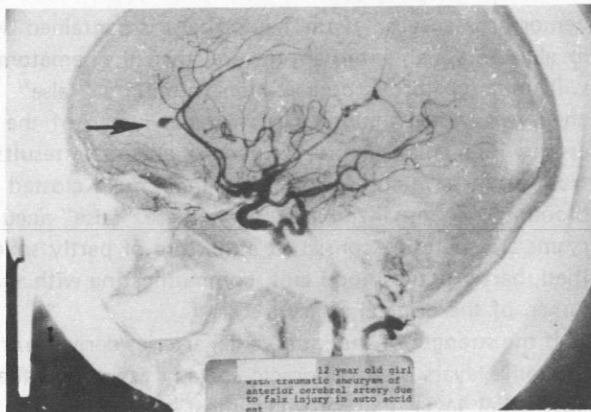


FIGURE 4.—A right carotid angiogram (lateral view) demonstrates a traumatic aneurysm (arrow) arising from the pericollal portion of the right anterior cerebral artery at the level of the genu. Note that this aneurysm is not located at a bifurcation.

Neurosurgical Unit of the hospital. On examination she was obtunded, answering only in monosyllables. There was marked neck stiffness with a positive Kernig's sign, impairment of conjugate gaze, and a right facial weakness. A lumbar puncture revealed uniformly blood-stained fluid. Carotid angiography showed that the source of the subarachnoid hemorrhage was an aneurysm, arising from the right pericollal artery at the level of the genu, with the suggestion of a small clot in the left hemisphere. (See Figure 4) This aneurysm was clipped at an operation performed on 5 July 1971, and was found to lie between the hemispheres, in a clot cavity that measured about 2cm in diameter. The aneurysm was actually considerably larger than appeared to be the case on the angiogram, due to the fact that the aneurysmal contents were partially clotted.

Postoperatively the young lady made good progress. When last seen on 23 October 1971, she was doing well at school, and was scholastically placed sixth out of 18 girls; her only problem was a stammer, which had been present before the accident.

This aneurysm was considered to be one of traumatic origin because of the uncommon site of the lesion, and the age of the patient. It would seem likely that the pericollal artery had been damaged against the sharp edge of the falx cerebri.

TYPE 5. ANEURYSMS INVOLVING THE MENINGEAL ARTERIES

Characteristically, these aneurysms present an angiographic picture of a dye-filled sac which is often situated on the lateral floor of the middle fossa (See Figure 5), i.e., the site of the larger, more proximal meningeal

arteries. The associated extradural hemorrhage displaces the middle-cerebral-artery complex, and on the angiogram study there is a lenticular area of avascularity indicative of an epidural hematoma. The associated extradural hematoma is responsible for the rapidity of development of clinical signs, and the high mortality rate. Clinically, meningeal artery traumatic aneurysms are usually associated with linear skull fractures; after a period of unconsciousness or confusion, the patient may subsequently exhibit a "lucid interval," only to slip back into coma with an ipsilaterally dilated pupil and contralateral hemiparesis.¹

When performing angiography on a patient who has incurred a head injury, the initial angiogram should include at least the *common* carotid artery bilaterally, in order to visualize both the internal and the external carotid systems. If a middle meningeal aneurysm is demonstrated, the external carotid vessel may then be selectively catheterized. In our hands, subtraction angiography has also been of great value.⁵

Our series consists of seven patients with traumatic aneurysms involving the meningeal artery.

Case Report 6-5

A 61-year-old patient incurred a frontal and parietal fracture as a result of a motorcycle accident. He

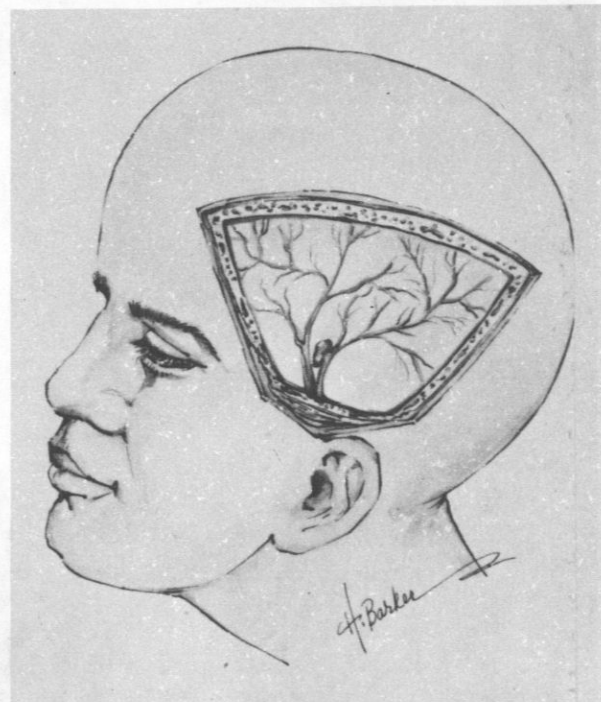


FIGURE 5.—Artist's conception of meningeal artery traumatic aneurysms. Such aneurysms are usually accompanied by a skull fracture, and are associated with a mortality rate above 50%. An epidural hematoma usually results when these traumatic aneurysms rupture.

sustained a very severe closed-brain injury, with prolonged coma. The skull X-ray studies demonstrated an inverted V-shaped fracture, the posterior element of which ran backwards and downwards from the region of the coronal suture into the mastoid air-cell system, which showed a loss of translucency. The anterior limb of the fracture ran down and forwards, crossing the meningeal grooves in the region of the pterion, and then extending forward into the floor of the anterior fossa. There was a 2mm pineal shift from left to right. The lateral angiogram revealed the development of a 4 x 8 mm. aneurysm on the anterior branch of the middle meningeal artery, exactly at the point where the branch was crossed by the linear frontal fracture that arose from the floor of the anterior cranial fossa to extend back to the coronal suture. The aneurysm was associated with a small fistulous communication with some dural veins, which then drained into the superior sagittal sinus. The middle meningeal artery deviated medially below the aneurysm, probably due to the presence of a small extradural hematoma at that site. As suggested clinically by the comatose state, and finally confirmed at autopsy, a traumatic aneurysm of the middle meningeal artery was identified.

Case Report 7-5

A 33-year-old patient was admitted to the hospital following a head injury. Skull X-ray studies revealed a linear fracture of the left temporoparietal region. Angiography revealed a parietotemporal extradural hematoma, as demonstrated on the later X-ray study, with elevation of the middle cerebral complex and a traumatic aneurysm of the middle meningeal artery. The extradural hematoma was surgically evacuated, the aneurysm was obliterated, and clinical recovery followed.

Case Report 8-5

The patient presented a linear fracture in the right temporoparietal region, extending obliquely from the parietal bone to the temporal bone. Subtraction angiography revealed a traumatic aneurysm of the middle meningeal artery, contusion of the right temporal lobe, and a shallow extradural hematoma with no displacement of the midline vessels. He experienced an acute phase of left hemiparesis and left-sided focal epilepsy, with episodes of dilatation and nonreaction of the right pupil. He had not been admitted to a neurosurgical service until five days posttrauma, at which stage he was already beginning to improve. In view of his clinical improvement, surgery was not performed. The patient was treated conservatively, and achieved a full and uneventful recovery. He was followed for two

additional years, at the end of which time he was holding down a full-time job, without any evidence of neurological abnormality. It was felt that his cerebation was slower than it had been before his accident, but this tendency was predictable in view of the posttraumatic amnesia of four weeks.

Case Report 9-5

This patient had received a blunt head injury, and incurred a linear fracture commencing anteriorly in the right frontal region. The fracture consisted of two limbs which traversed the parietal bone, and joined again posteriorly.

The pineal body was calcified and was displaced from right to left by a distance of 6mm. The right carotid angiogram revealed a moderate extradural hematoma and a traumatic aneurysm on the anterior division of the middle meningeal artery. An accumulation of the contrast material was visible, attributable to extravasation of the dye at the aneurysm site. At operation contusion of the right temporoparietal region of the brain was demonstrated; a thin extradural and subdural collection of blood at the site of the aneurysm was obliterated. The patient made a full and uneventful recovery.

Case Report 10-5

This patient incurred a vertical fracture of the left temporal bone. Subsequent angiography served to identify an aneurysm of the proximal portion of the left middle-meningeal artery, immediately distal to the division from its main branch. The aneurysm was best demonstrated by subtraction angiography. The middle cerebral complex was elevated due to the associated extradural hematoma. The patient improved following surgical removal of the hematoma and ligation of the aneurysm.

Case Report 11-5

This patient had sustained a frontal bone fracture, and angiography revealed the development of a traumatic aneurysm on the distal portion of the anterior branch of the middle-meningeal artery. The lesion was excised uneventfully.

Case Report 12-5

The patient developed a meningeal aneurysm as a result of the turning of an osteoplastic right frontal temporoparietal flap for the treatment of a posterior communicating-artery aneurysm. A postoperative hematoma developed, and subsequent angiography revealed that an aneurysm had developed on the anterior branch of the middle-meningeal artery, where it had been intercepted by the osteoplastic cut in the bone.

Extravasation of contrast material from the ruptured iatrogenic meningeal aneurysm was demonstrated by angiography. The traumatic aneurysm was surgically exposed, and obliterated by coagulation.

SUMMARY

The clinical course and the typical angiographic appearances of the five major types of cranial and intracranial *traumatic* aneurysms have been addressed.

The authors consider that the following protocol represents the optimum in available surgical therapy:

- 1) Traumatic aneurysms of the scalp should be excised, as they are readily accessible and cured by total excision.
- 2) The treatment of traumatic aneurysms situated immediately adjacent to the cranial vault (aneurysms of the carotid and vertebral arteries just prior to their entry into the skull) must be individualized. Lesions that are accessible surgically and which provide enough normal artery distal to the aneurysm to allow for control of bleeding, may be excised and repaired with end-to-end anastomosis. Aneurysms which are situated immediately adjacent to the skull, however, without the technical possibility of definitive surgical repair, must be trapped. If the aneurysm is rapidly enlarging, a cervical ligation with combined intracranial clipping above the aneurysm is required.
- 3) Traumatic aneurysms of the arteries which traverse the cranium are primarily those involving the internal carotid artery. Such aneurysms often project into the cavernous sinus and may then project into, and totally fill, the sphenoid sinus. At the present state of our surgical technique these lesions are best treated by cervical ligation, and by intracranial clipping of the aneurysms immediately below the origin of the ophthalmic artery.

4) Traumatic aneurysms of the intracranial cerebral arteries are particularly amenable to surgical therapy. They usually involve cerebral arteries *on the surface* of the brain, and underlie areas of direct damage or fracture to the skull. These aneurysms should be clipped, with preservation of the parent artery whenever possible.

5) Traumatic aneurysms of the meningeal arteries should be ligated or excised. They are very prone to rupture, with subsequent epidural hemorrhage. Although several aneurysms of this category were not clipped in our series, as the study was developed and the cumulative literature was collated, it became increasingly evident that traumatic meningeal aneurysms are quite lethal and should be surgically obliterated at an early stage, in order to avoid extradural hemorrhage.

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LITERATURE SEARCHES

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The name and address of the requestor, typed on a gummed label, must accompany the request. No return postage is necessary. — *National Library of Medicine News*, Vol. XXIX, No. 2-3, Supplement, Feb-Mar 1974.

Gingival Margin Termination

By LT Jerry K. Johnson, DC, USN

Dentistry is progressing from a purely restorative approach with major emphasis on techniques and materials, to a gnathologic concept in which the interrelationship of all the tissues in the stomatognathic system must be considered. In his primary role of treating and preventing all types of oral disease, the dentist must be sure that he is not introducing any iatrogenic etiologic agents that could cause or promote the breakdown of oral tissues.

INTRODUCTION

In the construction of artificial crowns, the profound effect which placement of the restoration exerts upon the health of the stomatognathic system is readily demonstrated. The occlusion, contact areas, proximal contours, and interproximal embrasures are important in establishing the crown as a functional, healthy, and compatible part of the oral cavity. The gingival marginal termination is an important area that needs to be considered, if the optimum health of the supporting tissues is to be the purpose of the prosthesis and the goal of the practitioner.

The traditional practice of extension for prevention, advocated mainly by G.V. Black,¹ led to the practice of routinely placing the gingival margin of artificial crowns apical to the height of gingival contour, into the gingival sulcus. Most current fixed-prosthetic textbooks^{2,3,4,5} advocate the placement of the gingival margins subgingivally, to varying depths in the gingival sulcus. These textbooks form the backbone of dental

education, exerting considerable influence on the techniques, philosophies, and practices which dentists follow and utilize. The dental literature is the media for introducing new techniques and ideas, and the voice for evaluating procedures and concepts of modern dental practice. The current dental literature does not substantiate textbook views of routine subgingival marginal termination.

GINGIVAL IRRITATION

Chemical

Studies have demonstrated that well-finished Vitalium, gold, porcelain, and heat-cured acrylic, by themselves, do not produce any significant irritation in the adjacent periodontal structures.^{6,7} One report has mentioned the possibility of gingival irritation resulting from galvanic reaction with gold, and slight chemical irritation produced by low-fusing porcelain.⁸ While the materials from which permanent crowns are constructed cause little, or no irritation and inflammation of the periodontal structures, the permanent luting agents such as zinc phosphate and silicate cements do cause a degree of irritation, due to their chemical constituents.^{6,7,8,9}

Cement and Plaque

Due to an inability to produce a perfect gingival margin, cement lines of various dimensions persist around artificial crowns.^{7,10} The extent of this cement surface may amount to several square millimeters.¹¹ Because of its roughness, this imperfect margin may also cause mechanical irritation and mild inflammation in the adjacent tissues.^{7,8} Another cause of gingival inflammation is the entrapment of tissue between the crown and the tooth. The tissue becomes necrotic, and produces irritation and inflammation in the adjacent periodontal structures.^{6,9} The major cause of inflammation in periodontal structures around the

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margins of artificial crowns is the accumulation and retention of bacterial plaque, in the rough pocket areas of the crown margin, the cement line, and the gingival crevice.^{7,8,9,11,12}

MARGINAL TERMINATION

Both clinical and experimental studies have been undertaken to determine the marginal termination that is most compatible with periodontal health — above, level with, or below the gingival margin of the periodontium. In one clinical study, it was noted that more severe gingivitis developed when the marginal termination of artificial crowns was subgingival than occurred in corresponding areas of homologous teeth which were not crowned. When the crown margins were situated above, or at the level of the gingival margin, no significant difference in gingival health was demonstrated by comparing the crowned teeth with their uncrowned homologues.¹¹

A histological study of the depth of crown margins and the extent of associated inflammation in the periodontal tissues, when gold crowns were placed on dogs' teeth, indicated that those crowns which were extended to the level of the gingival crest produced little or no inflammation. Crowns whose margins were located either two millimeters above the gingival crest, or in the gingival sulcus, produced slight to severe inflammation of the periodontal tissues.¹²

Another clinical study generated the following results: eighty-three percent of the crowns with subgingival margins presented clinical signs of inflammation in the periodontium, while 78% of the crowns with margins terminating at a point level with the gingival crest, and 83% of the crowns with supragingival marginal termination were surrounded by clinically normal gingiva.¹³

In one article placement of the crown margin at the gingival crest whenever possible is advocated, since the tissue is protected from the crown's marginal irritants by the keratinization in this area.¹⁴ Another author agrees with this choice of placement, because better margins and crown contours can be formed when the crown margin terminates at the level of the gingival margin.¹² Other authors advocate the use of supragingival margins when possible, because alteration in the bacterial flora of the gingival sulcus has been demonstrated whenever artificial crowns terminate in the sulcus.^{8,15} Those who advocate the use of subgingival margins, do so for reasons other than periodontal health and compatibility.^{16,17} In one article recommending the use of supragingival margins whenever

possible, the need for extending subgingival margins to the epithelial attachment is emphasized, in order to avoid placing a zone of natural tooth in a confined area of food accumulation and inviting caries.¹⁵

In most of the current textbooks dealing with fixed prosthodontics, the placement of subgingival margins at various depths into the gingival crevice is advocated. This advice stems mainly from the tradition of extension for prevention, and the concept that the crevice offers a cleaner, more protected area with the optimum chance for success of the crown. Based upon scientific research and clinical studies, the bulk of current literature supports the principle of marginal termination at, or above the level of the gingival margin. On the basis of prevailing evidence the crown margins should terminate at, or slightly above the free margin of the gingiva, for optimum health of the supporting periodontal tissues. The subgingival margin will cause variable degrees of inflammation in the adjacent periodontal tissues due to mechanical, chemical, and bacterial irritation.

CLINICAL APPLICATION

The margins of all restorations should be smooth, tightly adapted and finished to the tooth, and should terminate at the exact degree of length as the prepared margin on the tooth. Smooth, closely fitting margins with neither over- nor underextension will reduce the extent of mechanical irritation and inflammation in the surrounding periodontal tissues. Accurate margins will also minimize the cement line, thereby reducing chemical irritation of the surrounding periodontium. The less irritating cements, such as the reinforced zinc oxide-eugenol and the polycarboxylates should be considered for use in all cases, and especially in cases where a past history of periodontal disease may suggest the presence of tissues with lowered resistance.

After cementation, any excess cement should be meticulously removed from the surrounding teeth and soft tissue, to prevent any irritation. In establishing as fine a margin as possible, irregular rough areas associated with any margin should be minimized if not eliminated, lest bacterial plaque proliferation flourish in these highly susceptible areas.

Bacterial plaque which accumulates on, and around the restoration, is the major cause of inflammation in the surrounding tissues. In addition to establishing an oral environment which the patient can keep clean, the dentist must instruct and motivate the patient to apply plaque-control techniques. Supragingival areas are easier for the patient to clean than subgingival margins. No matter how superior the restoration may be,

it is doomed to clinical failure if plaque-control procedures are not practiced by the patient.

Before any extensive restorative procedures are undertaken, the health of the periodontium should be evaluated and treated, if required, to establish the best possible foundation.

OTHER CLINICAL CONSIDERATIONS

There are many other factors that have to be considered when establishing the gingival margins in tooth preparations. All carious lesions must be completely excavated, and the preparation and artificial crown should terminate on sound tooth structure which frequently necessitates extension into the gingival crevice.

Any existing restorations should be covered by the artificial crown; since these restorations are frequently subgingival, they dictate the location of the margins subgingivally for the preparation and finished crown.

Esthetic considerations frequently demand the placement of subgingival margins, especially in the maxillary anterior region. Frequently the subgingival margins, which are necessary for optimum esthetics on the facial surfaces of the maxillary anterior teeth, are unnecessarily extended around to the lingual surface; esthetics is not a consideration in the placement of the lingual gingival margin.

Adequate retention is a requirement of any crown preparation. A lack of sufficient supragingival crown length for proper retention may require the dentist to extend the preparation subgingivally, to provide additional length and better retention. Only after all other means (such as pins and grooves) for improving retention have been evaluated, and used where indicated, should the preparation be extended subgingivally in order to gain the necessary retention.

The gingival marginal termination may be much higher than the marginal gingiva. In patients with excessive gingival recession the gingival margin is often established at the cemento-enamel junction, which may be 3-5mm, or more, above the gingival crest.

CONCLUSION

Although many factors have a bearing on the placement of the gingival margin for a restoration, when possible the margin should terminate at, or slightly above the free margin of the gingiva in order to promote optimum health of the supporting periodontal tissues.

Whatever its relation to the gingival crest the marginal termination of the restoration should be smooth, tight fitting, and equal in length to the prepared margin, in order to reduce the likelihood of mechanical, chemical, and bacterial irritation.

Before any extensive restorative work is initiated, the periodontal tissues should be in satisfactory condition, and the patient should be exercising good oral hygiene and plaque-control technique.

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A STUDY OF

Newborn Gastric Contents

By CDR Philip J. Goscienski, MC, USN* and
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The risk of sepsis in the newborn period, following prolonged rupture of fetal membranes (PROM), is a real but not easily predictable hazard.^{1,2,3} There is no certain, practical method by which infants at risk of sepsis can be identified early. Smear and culture of gastric contents, as well as other body sites,⁴ and the placenta may be useful,² but false negative and false-positive results are encountered frequently.^{3,4,5} A quantitative technique for bacterial culture of gastric contents was employed in the present study, in order to determine if the number of viable organisms increased with duration of ruptured membranes and could be related to the risk of infection. In addition to quantitative gastric cultures, more traditional clinical and laboratory indices of infection were measured, and a scoring system was devised for clinical application.

MATERIALS AND METHODS

All study patients were delivered at the United States Naval Hospital, San Diego, Calif., between Dec 1971 and Apr 1973. Gastric contents were aspirated from 151 infants immediately after delivery. Sixteen of these infants were born to mothers with premature rupture of membranes (PROM) for more than 24 hours; 19 mothers had PROM for more than 12, but less than

24 hours. The remaining 116 specimens were obtained from random admissions to the nursery. Gastric specimens were refrigerated immediately, and most were cultured within 24 hours. Quantitative cultures were done using a method previously described in studies performed on sputum.⁶ An aliquot of 2% N-acetylcysteine was added to a sample of gastric juice, and was vortically-mixed for two minutes. Serial dilutions were streaked onto MacConkey's (Mac), chocolate (SA), 5% sheep-blood (SBA), and Sabouraud's (Sab) agar using a quantitative (0.01 ml.) platinum-wire loop. Plates were examined after 24 and 48 hours of incubation at 37°C (Mac, SA, SBA), or at room temperature (Sab). Standard microbiologic methods were used for species identification.⁷ Anaerobic methods were not employed.

Background studies on the survival of common pathogens in refrigerated gastric juice were done using standard strains of bacteria (Bacti-check*). One-tenth ml. of a 10⁻⁵ dilution of an 18-hour brain-heart infusion broth culture of each organism was added to 1.0 ml. of pooled gastric juice. Pooled specimens were sterile and grossly free of blood or meconium. Pour-plate dilutions of the standard cultures were made at zero, 24, and 48 hours, and were incubated overnight at 37°C. Cultures were done in duplicate, and each organism was retested at least once using a second batch of pooled gastric contents.

Gram-stain smears of gastric contents from each infant were examined for neutrophils and bacteria. Approximately 50 duplicate smears were examined using Wright's stain, in order to compare the relative usefulness of each staining method.

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From a review of the hospital records, a scoring system based on several risk factors ("Septiscore," Figure 1) was calculated for each mother-child pair.

SEPTISCORE EVALUATION		
CONDITIONS		POINTS
1) Maternal fever within 24 hrs. of delivery (Rectal: over 100.5F or 38.0C; Oral: over 99.5F or 37.5C.)		1
2) Premature rupture of membranes; duration of		
12-24 hrs.	1	
24-36 hrs.	2	
36-48 hrs.	3	
over 48 hrs.	4	
3) Prematurity (Weight < 2500 Gm.; or 5 lb., 5 oz.)		1
4) Small for gestational age		1
5) Apgar score of 7, or less, at one minute		1
6) Foul amniotic fluid without gross amnionitis		1
7) Neutrophils present in gastric aspirate		1
(Highest possible score = 10 points.)		

FIGURE 1.—Scheme for scoring mother-child pairs at risk for newborn sepsis following prolonged rupture of fetal membranes.

Infants considered to be at risk of sepsis were evaluated independently by the nursery physicians, apart from the present study. "Routine PROM studies" at this facility include cultures of: gastric contents (which were processed separately from the quantitative cultures), the external ear canal, pharynx, rectum, and umbilical-cord surface. Cultures of blood, cerebrospinal fluid, and urine were obtained at the discretion of the attending pediatrician. Antibiotics were administered to the mother or infant according to the judgment of the attending physician.

RESULTS

Bacterial Survival in Gastric Juice

Pooled newborn gastric juice at refrigerator temperatures had no significant inhibitory effect upon five standard test organisms, except for *Pseudomonas aeruginosa*. (Table 1) The studies on *Pseudomonas*

TABLE 1

Survival of Gram-Negative Organisms in Pooled Newborn Gastric Juice at 4°C, Saline Control. Numbers represent organisms/ml.

ORGANISM	SALINE	GASTRIC JUICE
<i>Sal. typhimurium</i> :		
Zero hours	126	120
24 hours	110	90
48 hours	95	80
<i>Proteus vulgaris</i> :		
Zero hours	48	45
24 hours	53	42
48 hours	72	31
<i>P. aeruginosa</i> :		
Zero hours	22	25
24 hours	28	0
48 hours	38	0
<i>A. cloacae</i> :		
Zero hours	80	80
24 hours	95	72
48 hours	105	60
<i>E. coli</i> :		
Zero hours	52	61
24 hours	50	34
48 hours	46	22

aeruginosa were repeated twice, using different pools of gastric juice. All three pools inhibited the growth of *Pseudomonas*.

Quantitative Newborn Gastric Cultures

Of 151 infants studied, only five had positive quantitative gastric cultures. There was no progressive increase in viable organisms with time duration of ruptured membranes. The study results in the five positive infants are summarized in Table 2. Four of the five

TABLE 2

POSITIVE QUANTITATIVE GASTRIC CULTURES

PATIENT	ORGANISM	COLONIES/ML.	PROM (HRS.)
Baby B.	<i>E. coli</i>	5×10^3	23
Baby M.	<i>P. vulgaris</i>	9×10^3	2
Baby W.	<i>S. faecalis</i>	1×10^3	20
Baby S.	<i>E. coli</i>	2×10^2	42
Baby O.	<i>P. vulgaris</i>	3×10^2	26

mothers had had PROM for 20 hours or more. Only one infant was described as "foul-smelling," and none showed any sign of clinical illness. No infant received antibiotics. Blood culture examination of one infant was negative. Gastric contents from three of these infants were sent to the clinical laboratory for bacteriological study. *E. coli* was reported in two cases, whereas the quantitative cultures yielded *Proteus vulgaris*. The clinical laboratory ear-canal culture from one of these infants grew "*Proteus species*." A third specimen showed no growth in the clinical laboratory, whereas the quantitative culture yielded *E. coli*. Of these five patients with positive cultures, the gastric specimen of one showed many neutrophils on smear but the other four had few or none. Only one mother had received an antibiotic (ampicillin) prior to delivery.

Seventeen specimens yielded *Candida albicans*, but none of these were obtained from infants with PROM duration greater than 24 hours. The significance of this finding is clouded by the fact that 12 of the 17 infants were born during a single four-day period, and, while never identified in the nursery or the laboratory, contamination was probable.

Of 16 mothers with PROM duration greater than 24 hours, eight had received antibiotics prior to delivery. None of the infants of antibiotic-recipient mothers had a positive culture; organisms on gastric smear were recorded for three of the infants. Of eight mothers not on antibiotics, two had infants with positive gastric cultures; and organisms on gastric smear were observed for infants of five mothers. Statistical analysis has not been applied to these findings in view of the very small sample size.

Seven patients were born via cesarean section. Three had neutrophils on gastric smear but none had organisms present.

Examination of Gram-stain Smears of Gastric Contents

Neutrophils were present in most specimens (88 out of 151, or 58%), but in approximately one-half of these the number of cells was considerably less than one per oil-immersion field. If only those specimens with approximately one neutrophil per oil-immersion field are considered (Table 3), then about half (43%) of the mothers with PROM greater than 12 hours' duration are found to have infants with neutrophils in the gastric aspirate; of those with PROM less than 12 hours, neutrophils were present in 27% of the infants. Among normal as well as "PROM infants," it was common to find bacteria on the Gram-stain smear of gastric contents in spite of the low frequency of positive cultures (Table 3).

TABLE 3
GRAM-STAIN SMEARS OF NEWBORN
GASTRIC CONTENTS

FINDINGS	PROM* (Duration in hours)		
	0-12	12-24	>24
Neutrophils present	31/116 or 27%	8/19 or 42%	7/16 or 44%
Organisms present	36/116 or 31%	2/19 or 10.5%	8/16 or 50%

*PROM = Premature rupture of fetal membranes

Septiscore

There were no infant deaths among these patients, and no infant had a positive blood culture (tested in nine subjects). Without a firm indicator of infection, the Septiscore could not be correlated with outcome. However, some general information regarding the Septiscore is listed in Table 4. Only two infants with a score of zero received antibiotics. One patient had fetal distress, pneumonia, pneumomediastinum and pneumothorax; the other had meconium ileus. Of the patients who were assigned a Septiscore of one, two also received antibiotics. One was the infant of a diabetic mother; the other infant had a transient pulmonary infiltrate, and Influenza A virus was recovered from the pharynx.

DISCUSSION

The main objective of this study, a correlation of clinical findings with the numbers of viable organisms observed in gastric juice of newborns, was not accomplished. Clinical evidence of sepsis was absent among the infants included in this study. Blood cultures were taken from nine infants, and all cultures were negative. Had blood cultures been taken from every infant in the study, there could be no certainty that the procedure would have provided a definite indication of sepsis because bacteremia is not a rare event in apparently normal infants.⁸ A few mothers and infants received antibiotic therapy, further clouding the results.

On the basis of earlier reports^{2,9} it was anticipated that at least some patients with PROM of less than 12

TABLE 4							
CORRELATION OF SEPTISCORES WITH VARIABLE FACTORS							
VARIABLE FACTORS	SEPTISCORE POINTS						
	0	1	2	3	4	5	6
Number of infants	64	42	27	6	8	3	1
Neutrophils present	—	22 (52 %)	15 (55 %)	3 (50%)	4 (50%)	1 (33%)	1 (100%)
Routine PROM cultures	6 (9 %)	9 (21 %)	6 (22 %)	4 (67%)	5 (63%)	3 (100%)	1 (100%)
Antibiotic Rx in the first 72 hours of life	2 (3.1%)	2 (4.8%)	1 (3.7%)	0	2 (25%)	1 (33%)	0

hours' duration would have positive gastric cultures, and that the percentage positive, as well as the "gastric juice colony count" might increase as the duration of rupture of membranes increased. With one exception, the positive gastric aspirate cultures were obtained from infants with prolonged (20 hours or more) rupture of membranes, and none of the infants appeared ill. Although socioeconomic factors may account, at least in part for this low yield,¹⁰ it is possible that a delay of even a few hours contributed to our failure to obtain positive cultures. The character of gastric juice itself may influence the survival of bacteria. Our background studies did indicate a marked bactericidal effect of gastric juice on *Pseudomonas aeruginosa*. Except for having repeated and confirmed the survival studies with different pools of gastric juice, we have not investigated this phenomenon further.

Our findings agree with those of Ramos and Stern,² that neutrophils are more likely to be observed in gastric juice as the duration of rupture of membranes increases. Neutrophils were not invariably present even after prolonged rupture of membranes, and of the four infants with PROM and positive cultures, only two showed more than rare neutrophils in smears of the gastric aspirate.

Technical details may affect the results of the simplest procedures, including microscopic examination of gastric smears. Gastric juice is a mixture of aqueous, mucous and particulate material (Figure 2), and it was often necessary to scan a relatively large area of the smear to avoid overlooking clumps of neutrophils. We found that the Gram-stain slides were much easier to read than those treated with Giemsa stain, because

the latter appears to have a greater affinity for non-cellular material and obscures cellular detail.

The observation that bacteria may be present on smears of the gastric contents, in the absence of positive cultures, has been made by others;¹¹ Wilson, *et al.*,⁹ observed that this finding bears no relation to the risk

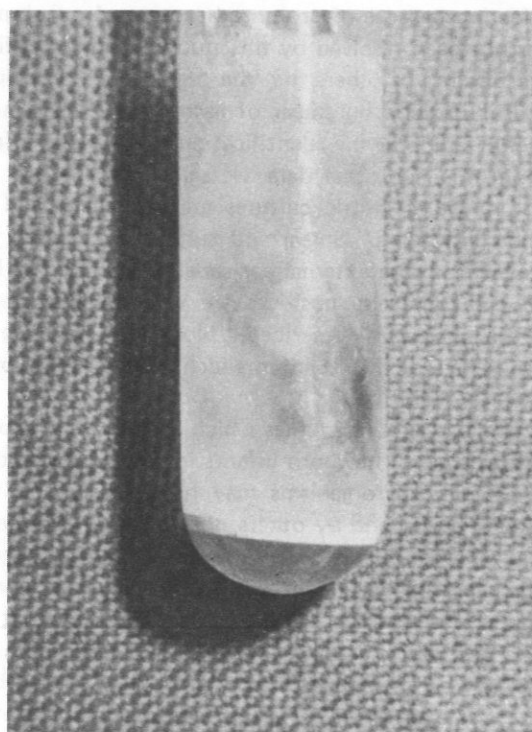


FIGURE 2.—Newborn specimen of gastric contents. Note the liquid, particulate, and mucoid layers.

of infection. The observed discordance between smear and culture may be due to our failure to employ anaerobic culture techniques. Anaerobic methods were not used because we could not avoid at least some delay in processing specimens. We are not aware of definitive published studies on this matter, and the clinical significance of anaerobic organisms in neonatal sepsis has not been addressed in recent publications.^{1,12,13}

The "Septiscore," a device intended to provide an objective, numerical assessment of risk from infection, could not be correlated with outcome because no unequivocally infected infants were identified among the study population. What we did find could have been predicted from earlier observations,² or from the design of the "Septiscore" itself. As expected, the likelihood that "routine PROM cultures" would be ordered increased as the "Septiscore" rose (Table 4). Since the duration of rupture of membranes may account for four of the ten possible points in the scoring system, this is not an unexpected finding. The absence of any correlation with the presence of neutrophils on smear of gastric contents was consistent with earlier studies.² Investigation of a larger series of infants-at-risk, or a modification of the "Septiscore" may further determine its usefulness as a means of providing an objective assessment of the risk of sepsis.

The problem of identifying the newborn at risk of infection because of prolonged rupture of membranes has not been resolved by this study. We did confirm the findings of others that the presence of neutrophils and/or bacteria on smear of gastric contents is not a useful factor in the identification of infected infants. From this, and other data, we agree with Hosmer and Sprunt⁵ that gastric cultures are inefficient and possibly misleading. Smear and culture of material obtained from the external ear canal may provide a helpful clue but false positives are very common, and in the small series described,⁴ blood cultures were positive in five of the six infants identified as septic by ear smear and culture.

Our background studies which showed that pooled gastric juice of newborn infants inhibits the growth of some coliform organisms may have bearing on the finding by us, and by others, that bacteria may be present on smear of gastric juice while cultures are negative. The most likely explanation for this phenomenon is that the organisms are mostly anaerobes, and that the mild but definite acidity of gastric juice is inhibitory to many coliform organisms. Swallowed maternal blood may also exert some bacteriostatic or bactericidal effect. Other substances in gastric juice may play a role in bacterial inhibition, and this may be a fruitful area for further investigation.

SUMMARY

Examination of gastric contents of 151 newborn infants revealed that the presence of neutrophils and bacteria was common. With one exception, positive gastric cultures were associated with prolonged rupture of membranes, but no infant had proven sepsis and none appeared clinically ill. Quantitation of gastric cultures was not useful in the present study. A clinical scoring system to determine the risk of sepsis is presented. Newborn gastric juice has relatively little capacity to inhibit growth of coliform organisms at refrigerator temperatures.

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SALABRASION & GONORRHEA REFERENCES

To the Editor: Addressing the "Just Browsing . . ." section of *U.S. Navy Medicine* 63(4):42-43, Apr 1974, I would like to add an important reference on salabrasion, and also on gonorrhea, to contributions made by Navy dermatologists.

A more complete, practical, and simpler approach to salabrasion of tattoos may be found in *Cutis* 7:295-300, 1971. Similarly, a practical guide to the diagnosis, treatment, and follow-up of venereal diseases, applicable to WESTPAC situations where laboratory facilities are limited, can be found in *Sexually Transmitted Diseases*, ed by Nicholas, pp 105-139, Springfield (Ill.), Charles C. Thomas Co, 1973.

CDR T.E. Carson, MC, USN
Nav Hosp Oakland, Calif. 94627.

? OFFENSIVE CARTOON

To the Editor: As Special Assistant for Dental Affairs I peruse over 40 professional journals a month. In even the most subtle accoutrements they convey a most positive approach to health care.

For some time now I have been seeing, now finally looking at, the graphic used for "Notes and Announcements" in *U.S. Navy Medicine*. I and others (including CAPT Roger Howard) feel the drawing of a half-figure holding an extracted tooth (blood and all) is not in keeping with the military's, and especially the Navy's worldwide reputation in preventive dentistry and preservation of oral health.

This may be a very minor point but the Navy Dental Corps and Medical Corps have built their excellence on attention to detail. Others (not Navy MSCs) have remarked about the ambiguity of the bald figure, either

saluting, or is he demonstrating impaired hearing? We don't salute bare headed, etc . . . I could go on and on but I think you get the point.

CAPT Henry J. Sazima, DC, USN
Special Assistant for Dental Affairs
Office of the Assistant Sec. of Defense
Washington, D.C. 20301.

PROFESSIONAL-MEETING ATTENDANCE

To the Editor: LT Hakkarinen's dismay at the lack of Navy representation at the annual meeting of the American Academy of Family Physicians (See "Letters to the Editor," *U.S. Nav Med* 63(4):36, Apr 1974), is understandable and explainable.

Unfortunately, the AAFP annual meeting coincided exactly with the Surgeon General's Specialty Advisory Committee Meeting for 1973. The participation of many of our Navy family physicians at the latter meeting precluded their attendance at the National meeting of their Academy. Similarly, their participation in the SAC meeting prevented attendance of many other Family Physician staff members at the Academy meeting because of the obvious necessity to "mind the shop."

LT Hakkarinen will be pleased to know that at a more recent meeting of an Ad Hoc Committee for the establishment of the Military Chapter of the AAFP conducted at Fort Belvoir, Va., the Navy was fully and equally represented.

The representation and attendance of Navy Medical Corps officers at medical meetings continues to receive the full support of the Surgeon General. Within the limitation of available funding, every effort is and will continue to be made to support this participation.

CAPT W.M. McDermott, Jr., MC, USN
BUMED Code 316-1.

ARMED FORCES REGIONAL HEALTH-SERVICE SYSTEM

To the Editor: In the "Notes and Announcements" section of *U.S. Navy Medicine* 63(1):50, Jan 1974, a confusing item is noted under the title "Armed Forces Regional Health-Service System."

It would seem logical that the Northwestern Panhandle of Florida should be included in Region 9 of the system (vice Region 13), while the balance of Florida (less the Northwestern Panhandle) should be included in Region 13.

Please clarify this matter.

CAPT W.W. Simmons, MC, USN,
Head, Training Department,
Naval Aerospace Medical Institute,
Pensacola, Florida 32512.

This query was forwarded to the Armed Forces Information Service (AFIS) which had generated the news item in question. The following reply was provided.—Ed.

"The information provided in the AFIS News Feature and as reprinted in *U.S. Navy Medicine* 63(1):50, Jan 1974, is correct. The Office of the Assistant Secretary of Defense (Health and Environment) drew the lines of demarcation between the various medical regions, based on personnel numbers and available facilities. Northern Florida is included in Region 9, with the balance of Florida assigned to Region 13."

COL F.S. Michael, Jr., USAF
Commander, Armed Forces Information Service, OASD (M&RA),
Washington, D.C. 20305.

NEWS OF OLD FRIENDS

To the Editor: Many thanks for your letter and the accompanying photographs of Naval Support Activity Da Nang. This gives me the alpha and the omega, and I will search for the span between the two.

WORKSHOP FOR HISTOTECHNOLOGISTS

The Armed Forces Institute of Pathology has developed a new five-day course entitled "Wet Workshop for Histotechnologists." The course consists of three days of workshop and two days of lecture. Applicants must have one year's experience in a histopathology laboratory, and must be sponsored by a pathologist.

For further information, contact: Associate Director for Education, Armed Forces Institute of Pathology, Washington, D.C. 20306. — *AFIP Letter*, 133(4):3, May 1974.☸

Congratulations again on . . . *U.S. Navy Medicine* . . . I find now that not only are the other branches of the Armed Forces delighted with it, but also a good many of my civilian confreres here at Kaiser-Permanente look forward to my copy each month.

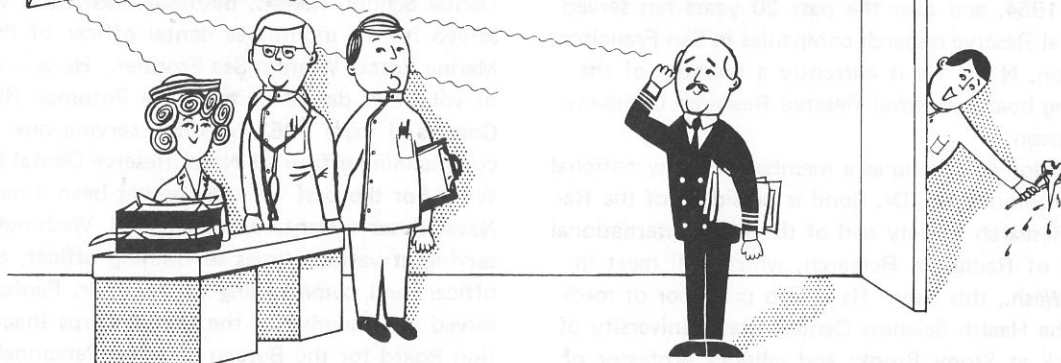
CAPT Bruce L. Canaga, Jr., MC, USN (Ret.)
701 Blackmer Circle
Sacramento, Calif. 95825.



ON STATION.—Through the courtesy of HMC R.M. Johnsen, USN (formerly in BUMED Code 49), this snapshot of CAPT Canaga provides an on-site view of the CO, NSA Hospital Da Nang, RV, in 1966.

(Readers are asked to provide CAPT Canaga with any possible photographs of the late NSA Hospital in Da Nang, RV, which they may possess. As the first commander at that NSA hospital in 1965-1966, CAPT Canaga had precious little time for acquiring the niceties of photojournalism which he and his dedicated staff inspired. He is understandably interested in collecting memorabilia that pertain to any part of the history of that facility.—Ed.) ☸

Notes and Announcements



ERRATUM

U.S. Navy Medicine 63(5): p 46, May 1974, contains a sizable error in the first item of "Notes and Announcements." The ranks of *ADM J.L. Holloway III*, nominated to succeed as CNO, and of *ADM Elmo R. Zumwalt, USN*, the retiring CNO, were improperly printed as VADM. A quick reference to the officer Register indicates the supremely low lineal numbers of these two Naval officers, as might be expected in the case of the Chief of Naval Operations.

We hasten to add that it was our own Medical Department officers who rapidly (and properly) took us to task for this blatant error, and not the fine gentlemen concerned. Our apologies to all. 🍀

TWO RESERVE OFFICERS SELECTED FOR FLAG RANK

Congratulations to two Naval Reserve captains selected for promotion to flag rank in Fiscal Year 1975.

CAPT Victor P. Bond, MC, USNR, currently associate director of Brookhaven National Laboratory, Upton, N.Y., was born 30 Nov 1919 in Santa Clara, Calif. He received his BA degree from the University of California, San Francisco, in 1943, and his MD degree from the University of California, San Francisco School of Medicine in 1945. In 1952, he received his PhD degree in medical physics from the University of California at Berkeley, and in 1964 he was awarded an honorary doctor of science degree from Long Island University, Brooklyn, N.Y.

As a member of the Naval Reserve, Dr. Bond completed his internship at Nav Hosp Astoria, Ore., in 1946, and joined the staff of that facility as laboratory and

ward medical officer. In 1947 he augmented in the U.S. Navy while an NROTC student at the University of California at Berkeley.

CAPT Bond's expertise encompasses the fields of hematology, radiation biology, nuclear medicine, and other medical disciplines. He served as head of the Experimental Pathology Section, U.S. Naval Radiological Defense Laboratory, San Francisco, Calif., from 1948 to 1954. He also served as deputy director of the medical team that cared for the Marshallese after their exposure to fallout radiation. Following his resignation and honorable discharge from the Navy in Jan 1954, Dr. Bond joined the staff of Brookhaven National Laboratory where he held various positions before being named associate director in 1967. His work at the



RADM Selectee
CAPT Victor P. Bond, MC, USNR

Laboratory deals largely with peacetime application of nuclear energy.

Dr. Bond was reappointed LCDR in the Naval Reserve in 1954, and over the past 20 years has served with Naval Reserve research companies in San Francisco and Upton, N.Y. He is currently a member of the counseling board of Naval Reserve Research Company 3-9 in Upton.

In addition to serving as a member of many national scientific committees, Dr. Bond is president of the Radiation Research Society and of the Fifth International Congress of Radiation Research, which will meet in Seattle, Wash., this July. He is also professor of medicine at the Health Sciences Center, State University of New York at Stony Brook; and adjunct professor of radiology at Columbia University. Dr. Bond has authored and coauthored more than 250 scientific papers, principally dealing with the effects of radiation, hematology, and cell kinetics.

CAPT Bond holds the American Campaign Medal, WWII Victory Medal, National Defense Service Medal, and the Armed Forces Reserve Medal.

CAPT Albert G. Paulsen, DC, USNR, clinical associate professor of periodontics at the School of Dentistry, Georgetown University, Washington, D.C., was born on 20 Aug 1919 in New Haven, Conn. He received his predental education at Loyola College in Baltimore, Md. (1939-1942), and subsequently earned his DDS degree from the Georgetown University School of Dentistry in 1945. In 1950, he earned a master of science in dentistry degree from the graduate School of Dentistry, Northwestern University.



RADM Selectee
CAPT Albert G. Paulsen, DC, USNR

Dr. Paulsen began his career in the Naval Reserve as an ENS in 1942. From 1946 to 1947, he served as a dental officer and assistant in periodontics at the Naval Dental School, NNMC, Bethesda, Md., after which he served for 15 months as dental officer of the Fleet Marine Force, Western Sea Frontier. He was a member of volunteer dental units of the Potomac River Naval Command from 1951 to 1956, serving one year as commanding officer of Naval Reserve Dental Company W-2. For the past 18 years he has been a member of Naval Reserve Dental Company 5-8, Washington, D.C., serving at various times as training officer, executive officer, and commanding officer. Dr. Paulsen also served as a member of the Dental Corps Inactive Selection Board for the Bureau of Naval Personnel.

CAPT Paulsen is a consultant in periodontology to the U.S. Navy and the U.S. Army. In 1971, he was awarded a Certificate of Achievement for his services to the Walter Reed Army Medical Center. He has also received the Vicennial Medal from Georgetown University Medical Center in recognition of his 20 years of teaching at the School of Dentistry.

Dr. Paulsen is chairman of the Governor's Committee on Education for the Health Professions and Occupations for the State of Virginia, and assists the Dental Science Advisory Committee of the Northern Virginia Community College in establishing dental programs for that school. He is a diplomate of the American Board of Periodontology, and a fellow of the American College of Dentists and the International College of Dentists. He currently maintains a private practice in periodontics.

CAPT Paulsen holds the China Service Medal, American Campaign Medal, WWII Victory Medal, Armed Forces Reserve Medal, and Naval Reserve Medal.

BUMED MEDICAL RECORDS TO BE RETURNED TO FIELD

In Jan 1972, BUMED stopped maintaining medical records of members on active duty. Since then, field activities have maintained the cumulative record of a member's physical condition and treatment received during active service.

However, because of the previous practice of forwarding to BUMED portions of a member's health record at the time of reenlistment or following a periodic physical examination, many members are now without the benefit of a cumulative record. BUMED is therefore preparing to send to the field the Bureau medical record of members who were on active duty prior to 1 Jan 1972. This action will insure that all

members on active duty have their complete medical record with them in the field.

When the Bureau medical record is received at the command, the following actions will be required:

- Duplicate copies found either in the material forwarded or in the field health record will be destroyed.

- If a member has been separated from the Navy, the medical record will be returned to BUMED, Code 334.

- If a member has been detached due to orders, the medical record will be forwarded to his new permanent duty station, and BUMED (Code 334) will be so advised.

The cooperation of all responsible persons is necessary to insure that records from BUMED are incorporated into the cumulative health record.—BUMED, Code 33. 🍀

HOSPITAL CORPS LISTS FY 75 TRAINING NEEDS

The Hospital Corps has determined its training requirements for Fiscal Year 1975. Since these requirements change almost weekly, corpsmen are encouraged to apply for *two different courses* when requesting further training. Corpsmen should consider the following information before requesting training at a C school:

- No training is available in specialties leading to the following Navy Enlisted Classifications:

- 8453 (electrocardiograph technician)

- 8472 (photography technician)

- 8486 (urological technician)

- 8495 (dermatology technician)

- Quotas for the 8466 specialty (physical and occupational therapy technician) are filled.

- Specialty 8484 (eye, ear, nose and throat technician) has been discontinued. This training is now offered in the following two courses:

- 8444 (ocular technician)

- 8446 (otolaryngology technician)

- Specialty 8498 (medical repair technician) has been discontinued. This training is now available in the following three courses:

- 8477 (biomedical equipment technician, basic)

This course is a prerequisite for subsequent biomedical training.

- 8478 (biomedical equipment technician, X-ray)

There is no quota for this specialty for FY 75.

- 8479 (biomedical equipment technician, electronic)

There is no quota for this specialty for FY 75.

- Quotas for the following specialties are extremely limited:

- 8408 (cardiopulmonary technician)

- 8433 (transplantation technician)

- Applicants for training in the following specialties are *urgently* needed at all times:

- 8402 (nuclear submarine medicine technician)

- 8407 (nuclear medicine technician)

- 8492 (special operations technician)

- 8493 (medical deep-sea diving technician)

- Quotas for the remaining specialties are generally available, with the following specialties reflecting the greatest need:

- 8406 (aerospace medicine technician)

- 8424 (medical services technician)

- 8463 (optician technician)

- 8482 (pharmacy technician)

- 8483 (operating-room technician)

- 8485 (neuropsychiatry technician)

- 8501 (laboratory technician, basic)

(BUMED, Code 34) 🍀

NEW CONSTRUCTION SET FOR NAVY MEDICAL DEPARTMENT

Anticipated completion dates have been announced for major medical projects currently under construction at the following locations:

Jun-Aug 1974

NAV HOSP LONG BEACH, CALIF.

220-bed addition

NAV HOSP NEWPORT, R.I.

Hospital modernization, phase III

NAS ATLANTA, GA.

Dispensary/dental clinic replacement

NAVWPNSTA YORKTOWN, VA.

Dispensary/dental clinic

NAV HOSP CAMP PENDLETON, CALIF.

600-bed replacement hospital

Jan 1975

NAS MOFFET FIELD, CALIF.

Dispensary/dental clinic replacement

Sep 1975

NAV HOSP PENSACOLA, FLA.

310-bed hospital replacement

Oct 1975

NAS SIGONELLA, SICILY
Dispensary/dental clinic replacement

Dec 1976

NAV HOSP NEW ORLEANS, LA.
250-bed hospital

The following medical projects are contained in the Fiscal Year 1974 Military Construction Program, which has been authorized and for which funds have been appropriated by the Congress:

NAS BARBERS POINT, HAWAII
Dispensary/dental clinic

NAV MED RESEARCH INSTITUTE
BETHESDA, MD.
Environmental Health Effects Lab, phase II

NAS CHASE FIELD, TEX.
Dispensary/dental clinic

NAVAL SHIPYARD, CHARLESTON, S.C.
Dispensary addition

NAV HOSP GREAT LAKES, ILL.
Upgrade to meet standards of National Fire
Protection Assn.

NAVAL TRAINING CENTER, GREAT LAKES, ILL.
Dispensary/dental clinic
Recruit facility

NAV HOSP GUANTANAMO BAY, CUBA
Air conditioning and modernization

NAV HOSP GUAM
Modernization of coronary care unit and intensive
care unit

NAS KINGSVILLE, TEX.
Dispensary/dental clinic

PHIBASE LITTLE CREEK, VA.
Dispensary/dental clinic

NAS LEMOORE, CALIF.
Dental clinic

NAS MERIDIAN, MISS.
Dispensary/dental clinic

NAV HOSP NEW ORLEANS, LA.
150-bed addition

NAV HOSP OAKLAND, CALIF.
Upgrade and air condition hospital
Construct new enlisted/chief petty officer club
Construct new warehouse


NAVREGMEDCEN PENSACOLA, FLA.
Medical/dental support facility

PMU No. 6 PEARL HARBOR, HAWAII
Replacement

NAV HOSP QUANTICO, VA.
Alteration to intensive care unit
Air conditioning of portions of hospital


MARCOR RECRUITING DEPOT
SAN DIEGO, CALIF.
Dispensary replacement

NAS WHITING FIELD, FLA.
Dispensary/dental clinic

A complete report on the military medical construction program will appear in a future issue of *U.S. Navy Medicine*.—BUMED, Code 412. 

**PARTICIPANTS SELECTED FOR PILOT
PROGRAM IN COMPREHENSIVE DENTISTRY**

LCDR Robert A. Lawton, DC, USN; LCDR Richard B. Finger, DC, USN, and; LCDR Ronald S.N. Chang, DC, USN have been selected to participate in a pilot program in comprehensive dentistry which will begin later this year at the Naval Graduate Dental School, Bethesda, Md. The program is designed to train dental officers to a high level of expertise in all dental disciplines. Primary emphasis is on clinical practice and instruction.

Applicants from each year's graduate course in general dentistry will be selected to participate in the program at the second-year level. No other applications are solicited.—BUMED, Code 61. 

**PREVENTIVE DENTISTRY
PUBLICATIONS AVAILABLE**

A copy of *Preventive Dentistry*, NAVMED P-5087 (1973), has recently been distributed to all ships and stations having dental personnel. This manual provides background and current information on preventive dentistry standards and practices, and also serves as an

operational-level guide to aid dental officers and their assistants in carrying out their responsibilities. The manual is to be placed within the hard binder, NAVMED P-5087, replacing the 1964 edition. Additional *clinic* copies, as well as a limited number of binders, are available upon request by the commanding officer to: Chief, Bureau of Medicine and Surgery (Code 6114).

Due to computer error, which has been corrected, many dental activities have not received preventive dentistry pamphlets which they have ordered. Activities with overdue outstanding requisitions should reorder at this time. "Do You Hesitate To Smile?", NAVMED P-5117 (1973), FSN 0510-100-1500 (quantity limit 100), and "Now You Are In Charge," NAVMED P-5118 (1973), FSN 0510-100-2000 (quantity limit 500), are available from: Commanding Officer, Navy Publications and Forms Center, 5801 Tabor Ave., Philadelphia, Pa. 19120.—BUMED, Code 6114.

NAVAL MEDICAL FIELD RESEARCH LAB DEVELOPS INSECT-REPELLING JACKET

A lightweight, wide-mesh net jacket developed by the Navy to protect combat soldiers against disease-carrying insects is taking the bite out of many outdoor activities.

The polyester/cotton jacket is treated with a commonly used insect repellent known as deet (diethyltoluamide), which produces a vapor barrier between the openings of the jacket's mesh fabric. The chemical repels mosquitoes, black flies, punkies, and other two-winged biting insects.

The hooded jacket provides approximately 1,000 hours of protection, and can be resaturated or resprayed with repellent for continued use. It is expected to be available through the Federal Supply Catalog and on the commercial market later this year.

The jacket was designed and tested at the U.S. Naval Medical Field Research Laboratory, Camp Lejeune, N.C., as part of the Navy's program to find new ways to control mosquito-borne diseases and reduce the incidence of malaria among military troops in Southeast Asia. It has been successfully field-tested in Alaska, Africa, Indonesia, Formosa, Panama, Vietnam, and Guantanamo Bay, Cuba.

The repellent used in the jacket was developed by the U.S. Department of Agriculture. Toxicity studies were done by the Army Environmental Hygiene Agency, Edgewood, Md., to insure that the repellent was safe for human use.—BUMED, Code 72.



REPELLENT PROTECTION.—Marine SSGT Carlton Arthur models the lightweight, wide-mesh net jacket developed by the U.S. Naval Medical Field Research Laboratory, Camp Lejeune, N.C., to protect military troops from disease-carrying insects. The jacket is chemically treated to repel most two-winged biting insects.

FACULTY SOUGHT FOR USUHS

A search is under way for medical educators to head the departments of anatomy, biochemistry, physiology, pharmacology, microbiology, pathology, and behavioral sciences in the Uniformed Services University of the Health Sciences (USUHS).

The Surgeons General of the Navy, Army, and Air Force have also been asked to nominate military personnel for both the basic science and clinical faculty of the tri-service medical university, which will be built on the grounds of the National Naval Medical Center, Bethesda, Md. Within the next four to six months, a search committee will begin to review the nominations and make initial selections. It is anticipated that the university's basic science faculty will for the most part be composed of civilian professors, but that the military will predominate during the clinical years.

Meanwhile, Dr. Anthony R. Curreri, president of the USUHS, and members of his staff have met with deans of selected medical schools and other outstanding medical educators from across the country to discuss recommendations for the university's curriculum.

The USUHS is scheduled to be in operation by 1978; the first class should complete studies by 1982. It is still hoped, however, that a small class will start within the next two years in interim facilities to be developed in the Bethesda area.—CAPT M. Museles, MC, USN, executive secretary, Board of Regents, USUHS. 🍀

NOISE WARNING SIGNS AVAILABLE

BUMED NOTICE 6260 of 26 Apr 1973 provides information on identifying hazardous noise areas, equipment, machinery, and tools, as well as new noise warning signs that can be ordered by the following stock numbers:

(1) FSN 0105-212-6010, NAVMED 6260/2, Hazardous Noise Warning Decal, 8" x 10-1/2"; unit of issue: pkg. of 25 signs. This decal contains information which may be appropriate in aiding individuals to minimize exposure to noise, or to assist in defining the hazardous noise environment. Only the pertinent information need be used; the rest of the information may be blanked out or removed from the placard.

(2) FSN 0105-212-6020, NAVMED 6260/2A, Hazardous Noise Labels (displayed on hand tools); unit of issue: pkg. of 25 sheets, with 56 labels per sheet. These are the approved decals and labels for marking noise-hazardous tools.

The summer 1973 issue of *Fathom* magazine, published by the Naval Safety Center, Norfolk, Va., includes a feature article on hearing conservation with color photographs of the new noise warning signs. An excellent color photograph of all of the hearing protectors currently in the medical supply system is also included, with a list of appropriate stock numbers.—CAPT E.C. Reed, Jr., MC, USN, NAVSAFECEN, Norfolk, Va. 🍀

PSYCHOLOGICAL FACTORS IN AIRCRAFT ACCIDENTS

The Federal Aviation Administration (FAA) has been studying accidents in which pilot mental condition is the primary factor in producing the accident. In FAA Report AAM-72-2, the background of pilots in three fatal accidents was reconstructed. In one case the pilot had several major life crises, including action by the Internal Revenue Service concerning an arrears in income tax, and a pending separation from his wife. Another case involved a pilot having extreme psychosocial difficulties and high alcohol intake. More and more, as these background investigations are being

conducted, it is becoming apparent that the mental state of the pilot plays the predominant role in flight safety decisions.

Copies of the above report and certain subsequent studies are available from the Office of Aviation Medicine, Federal Aviation Administration, Washington, D.C. 20590, Attention: AAM-120.—P.V. Siegel, M.D., Federal Air Surgeon, AAM-1. 🍀

CAPT CANTRELL WINS HARRIS P. MOSHER MEMORIAL AWARD

CAPT Robert W. Cantrell, MC, USN, chairman of the Department of Otolaryngology, NAVREGMEDCEN San Diego, Calif., has won the Harris P. Mosher Memorial Award for excellence in clinical research. The award is presented annually by the American Laryngological, Rhinological and Otological Society, Inc.

CAPT Cantrell was honored for his thesis, "Prolonged Exposure to Intermittent Noise: Audiometric, Biochemical, Motor, Psychological, and Sleep Effects." The thesis was based upon a joint study by the staffs of the Naval Undersea Center, Naval Electronics Laboratory



PROFESSIONALLY HONORED.—CAPT Robert W. Cantrell, MC, USN, chairman of the Department of Otolaryngology, NAVREGMEDCEN San Diego, Calif., has received the Harris P. Mosher Memorial Award for excellence in clinical research. (Photo by PHAN J.G. Rodriguez, USN.)

Center, Naval Neuropsychiatric Research Institute, and Nav Hosp San Diego. During the study, 20 healthy male volunteers were exposed 24 hours a day to intermittent noise for a period of 30 days. Their audiometric, biochemical, motor, psychological, and sleep-effect responses were carefully noted.

Dr. Cantrell presented his thesis and was received into the American Laryngological, Rhinological and Otological Society in April.—PAO, NAVREGMEDCEN San Diego, Calif. 🍀

AMERICAN SOCIETY FOR TROPICAL MEDICINE AND HYGIENE TO MEET

The American Society for Tropical Medicine and Hygiene will hold its 23rd Annual Meeting at the Princess Kaiulani Hotel, Honolulu, Hawaii, 3-6 Nov 1974. Scientific reports covering a wide range of recent topics in parasitology, malariology, arbovirology, and medical entomology will be presented.

The meeting is ordinarily restricted to members. Those interested in applying for membership in the Society should write to: Dr. George Healy, Secretary-Treasurer, PO Box 15208, Emory University Br. Post Office, Atlanta, Ga. 30333. Registration fee is \$15. Annual membership fees are \$15.

Persons interested in attending the meeting should write: Scott B. Halstead, M.D., Professor and Chairman, Department of Tropical Medicine and Medical Microbiology, University of Hawaii School of Medicine, 3675 Kilauea Ave., Honolulu, Hawaii 96816.

Abstracts of papers submitted for presentation (10-minute limit) must be sent by 15 June 1974 to: Dr. A. Ralph Barr, School of Public Health, Center for Health Sciences, University of California, Los Angeles, Calif. 90024. 🍀

MEDEX PA AT NAV HOSP PORTSMOUTH, N.H.

The Navy's first (MEDEX) physician's assistant in the New Hampshire area is assigned to Nav Hosp Portsmouth, N.H. A member of the staff of the Family Practice Service, Mrs. Jean Taylor takes detailed medical histories, conducts physical examinations, and aids doctors in performing diagnostic and therapeutic procedures for patients. She also can provide emergency care and treatment under direction of physicians, suturing minor cuts and functioning, in general as the physician's right hand.



MEDEX PA.—Mrs. Jean Taylor is the first MEDEX physician's assistant to be assigned to Nav Hosp Portsmouth, N.H. She is a member of the staff of the Family Practice Service.—PAO, Portsmouth Naval Shipyard, Portsmouth, N.H.

A graduate of the one-year Maine School of Practical Nursing, Mrs. Taylor was employed for seven years as a licensed practical nurse at the Naval Hospital. She became interested in the MEDEX New England Program for physician's assistants through a staff physician at the Naval Hospital. A background of four years spent in nursing, or as a paramedic, are required for admittance. MEDEX physician's assistants are trained to take care of minor illnesses so that physicians can devote their time to the care of more seriously ill patients.

Having filed application papers and taken prescribed tests, Mrs. Taylor was selected in Jan 1973, from a large field of candidates for training at the MEDEX New England facilities in Hanover, N.H. The Program is affiliated with Dartmouth College's Medical School.

Mrs. Taylor took a one-year leave of absence starting 1 Jan 1973, and began the program at Hanover. Three months of intensive instruction, and nine months of work experience under a family-practice physician were involved. Nav Hosp Portsmouth, N.H., had made arrangements for her to have the work experience at the Family Practice Service. She returned to Hanover every three months for further training.

After completing the one-year MEDEX Program, she qualified for a certificate as a physician's assistant through written and oral board examinations at Hanover, N.H. She also took the National Board exam for certification of physician's assistants, which was given nationwide. Having scored in the upper-third range of examination grades assigned, she is now Board certified and holds the position of physician's assistant at Nav Hosp Portsmouth, N.H. 🍀

DTCS RAY REENLISTS



The Assistant Chief for Dentistry and Chief, Dental Division, RADM R.W. Elliott, Jr., DC, USN (right) gives the oath to his assistant for enlisted affairs, DTCS Champ E. Ray, USN, reenlisting him for a period of six years. Senior Chief Ray has completed over 18 years of naval service and has served at the Bureau of Medicine and Surgery since October 1971. He manages the Statistics Section and the Dental Technician Training Program for the Dental Division, in addition to his assignment as the enlisted assistant to RADM Elliott.—Code 6, BUMED.

ANNOUNCEMENT OF MEETINGS

The University of Hawaii School of Nursing plans a one-week conference in cross-cultural communications and mental health, 17-21 Jun 1974, in Honolulu, Hawaii. The conference immediately follows the American Nurses' Association convention in San Francisco, Calif.

Topics to be discussed include: the cultural interface, ethnic variations in the phenomenology of emotions, family interaction patterns, sexual life styles, new roles for health professionals, and leadership and consultation styles. Keynote speaker is Madeleine Leininger, R.N., Ph.D.

For further details and application forms, contact:

Continuing Education Coordinator
University of Hawaii School of Nursing
Webster 301
2528 The Mall
Honolulu, Hawaii 96822

The International Committee of Medicine and Military Pharmacies will sponsor the seventh international course concerning the improvement of new military physicians, 22 Sep-2 Oct 1974, at Koksijde Air Base, Belgium. This course is directed toward junior medical officers who have been designated by military medical

authorities of their country. Uniforms must be worn during the working meetings.

Presentations will be given in French, English, and Dutch. Discussions will follow lectures.

Registration is free. Room and board for the duration of the course will cost 3,000 Belgian francs per person. Fees should be sent to: Account No. 570-0202002-09, c/o Secretary of the 7th Course CIMPM, First National City Bank, Brussels, Belgium.

For more information, contact:

Secretary of the 7th Course CIMPM
Inspector General of the Health Service
14 Cavalry Ave.
B-1040 Brussels, Belgium

INPATIENT MEDICAL CARE RATE HIKE

The inpatient dependent medical care per diem rate in military hospitals has been increased to \$3.50 per day. The rate increase also affects the cost-share requirements for dependents of active duty members under the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS).

The old per diem rate of \$1.75 per day for dependent hospitalization had been in effect since 1 Oct 1948. The decision for an increase follows recommendations that the minimum charge should be adjusted upward periodically to take into account adjustments in the compensation of service members. Since 1966, the weighted average of basic pay, quarters, and subsistence has shown an accumulated increase of 99 percent. The impact of the change will not be felt by patients using CHAMPUS who are hospitalized for seven days or less.

Additional per diem changes will be considered annually based upon average military pay increases.—NAVNEWS, 22 Feb 1974, p 6.

TOXICOLOGY INFORMATION PROGRAM PUBLICATIONS

The Toxicology Information Program, a part of the National Library of Medicine's specialized information services, sponsors a number of toxicology-related literature searches, state-of-the-art reviews, and other publications which are sold by the National Technical Information Service.

A list of available titles and prices is available by writing TIP, National Library of Medicine, 8600 Rockville Pike, Bethesda, Md. 20014.—*National Library of Medicine News*, Vol. XXIX, No. 2-3, Supplement, Feb-Mar 1974.

NEW DENTAL CLINIC AT NAVREGMEDCEN PORTSMOUTH, VA.

NAVREGMEDCEN Portsmouth, Va., has opened a new dental clinic designed specifically to provide improved professional training and treatment capabilities in the area of preventive dentistry.

One outstanding feature of the new clinic is a modern preventive dentistry unit in which four patients at a time can be instructed in the proper techniques of oral hygiene, plaque control, and topical fluoride application.

Situated within the new clinic are seven dental operating rooms and one X-ray unit. The dental operating rooms contain three well equipped operative-dentistry units, one periodontic unit, one oral-diagnosis unit, one oral-prophylaxis unit, and one unit assigned to the Dental Intern Program.

Equipment and cabinets utilized in the new clinic are a combination of new and used items, obtained over the past three years from a variety of sources. Installation was accomplished by personnel of Fleet Dental Repair, Naval Regional Dental Center, Norfolk, Va., and the staff dental personnel at the Medical Center.



DENTAL INSPECTION.—RADM Willard P. Arentzen, MC, USN (right), CO, NAVREGMEDCEN Portsmouth, Va., and CAPT Thomas E. Stump, DC, USN (left), Chief of the Dental Service, inspect the equipment in the new staff dental clinic at the Center.



NEW DENTAL CLINIC.—RADM Willard P. Arentzen, MC, USN, CO, NAVREGMEDCEN Portsmouth, Va., cuts the ribbon in opening the Medical Center's new staff dental clinic. CAPT Joseph T. Horgan, MC, USN (right), Director of Clinical Services at NAVREGMEDCEN, was also on hand for the dedication ceremony.

Dedicated on 20 Feb 1974, the clinic serves to increase the clinical space and treatment capability of the Dental Service by about 50%, and will be used to provide routine and preventive dental care for staff and inpatients at the Medical Center.

LCDR M.J. Poirrier, DC, USN, Head of Operative Dentistry, is Director of the new clinic.—PAO, NAVREGMEDCEN Portsmouth, Va. 🇺🇸

BAQ ENTITLEMENTS

The Comptroller General of the U.S. has ruled that BAQ entitlements for married personnel are retroactive when: both husband and wife are Service members, have no other dependents, and are assigned to the same or adjacent stations. On 13 Sep 1973, the Supreme Court ruled that women Service members whose husbands are also in the military are entitled to BAQ payments on an equal basis. Prior to this ruling, Service women with military husbands received BAQ payments at the single rate only, if they could not get housing on base. Now, both husband and wife receive BAQ at the single rate if they have no other dependents.

Because of the Comptroller General's ruling, these entitlements may accrue for periods prior to 13 Sep 1973, subject to the ten-year statute of limitations. In this case, the ten-year statute does not run during periods of active duty. This means that there is no time limitation on filing claims for people still on active duty. For those no longer in the military, the effective period of the statute of limitations began on the day of discharge from active duty.

All claims by Navy members for BAQ payments involving periods prior to 13 Sep 1973 should be submitted to the Navy Finance Center (Central Accounts Department) by letter or application for arrears in pay (DD Form 827). All claims must be supported by sufficient documentation and information to establish validity, and should include copies of marriage certificates, divorce decrees, identity of the Service husband sharing joint residence in non-Government housing, specific periods for which BAQ is claimed, and a statement that Government quarters were not occupied during the period(s) involved. SECNAVNOTE 7220 of 28 Sep 1973 contains details on BAQ eligibility for married Service members, and ALNAV 15-74 (DTG 031818Z/15 Apr 74) contains details on retroactive BAQ payments and procedures for filing claims.—CHINFO Newsgam, 16-74. 🍀

PREVENTIVE MEDICINE TECHNICIANS PAIR UP

The Preventive Medicine Technician School at NAV-REGMEDCEN Oakland, Calif., has produced its first bride and groom.

The bride is the former HM3 Marcia Dammen, USN, who in Jan 1974 became the first woman admitted to the School for full-time training. The groom is classmate HM1 Roy Hall, USN, a veteran of ten years of Navy service.

The Halls were married 20 Apr 1974. They have received orders to Camp Lejeune, N.C.—PAO, NAV-REGMEDCEN Oakland, Calif.



NEWLYWEDS.—HM1 Roy Hall, USN and his bride, the former HM3 Marcia Dammen, USN, leave the chapel at NAV-REGMEDCEN Oakland, Calif., after their wedding. Mrs. Hall is the first woman accepted for full-time training at the Navy's Preventive Medicine Technician School, where her husband is also a student. 🍀

NAVY-COAST GUARD SIGN ALCOHOL REHABILITATION AGREEMENT

ADM Elmo R. Zumwalt, Jr., CNO, and ADM Chester R. Bender, Commandant, U.S. Coast Guard, signed a memorandum of agreement on joint Navy-Coast Guard efforts to combat alcoholism, on 25 Apr 1974 at the Pentagon. The Navy and Coast Guard have been working together on alcoholism prevention and rehabilitation in the past. The official memorandum provides for continuation of these efforts, and coordination of the alcoholism programs of the Navy, Marine Corps, and Coast Guard. Included in the memorandum are provisions for use of naval alcohol rehabilitation centers and units by Coast Guard personnel, and assignment of one Coast Guard counselor to each of the centers used by their personnel.—CHINFO Newsgam, 17-74. 🍀

BERETS IN AGAIN

Navy women now have the option of wearing a black felt beret with their service dress uniforms. The new beret, which may be worn year-round, is a shaped, semi-rigid hat designed to be worn at the front hairline or at the back of the head, slanted slightly to the right.

The insignia is aligned approximately above the left eyebrow. Officers wear the miniature officer crest; enlisted women wear the regular hat insignia.

The beret is an optional item; it does not replace the bucket hat which must still be worn on official occasions.



STAGE COMEBACK.—Modeling the optional uniform beret for Navy women are (from left to right): CAPT E. Pfeffer, NC, USN; LCDR J.A. Emal, NC, USN (CDR selectee); CDR R.A. Wilson, NC, USN, and; CDR Joan Beckwith, MSC, USN (CAPT selectee). (Photo by U.S. Navy Medicine) 🍀

UNITED STATES NAVY MEDICINE

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HMC ROBERT L. WORTHINGTON MEMORIAL.—Recently opened at the Naval Station San Diego, Calif., is the new Chief Petty Officers' Club, "Worthington Hall."

HMC Robert L. Worthington, USN, the recipient of the Bronze Star with Combat "V," sustained mortal wounds during the Vietnam conflict.—NRMC News, San Diego, Calif. (Photos by PHAN Peter V. Campato)



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